

Historic, Archive Document

Do not assume content reflects current scientific knowledge, policies, or practices.



1.90
C2048

c3



Agriculture Outlook '94

U.S. Department of Agriculture Headquarters
Washington, D.C. November 30-December 1, 1993



Conference Proceedings

USDA
AGRIC. LIBRARY
JUN 18 1994
FEDERAL RECORDS
BRANCH



Agriculture Outlook '94

Conference Steering Committee

James R. Donald, Chair
John E. Lee, Jr.
Henry Bahn
Philip L. Mackie
Kitty Reichelderfer
Robert Riemenschneider

Conference Program Committee

Gerald A. Bange, Chair

Conference Director:	Raymond L. Bridge
Assistant Director:	Russell G. Barlowe
Conference Staff:	Carol Morgan/Verna Blake Tracey Shaw/LaWanda Musgrove/ Jodi Ponder
Volunteer Recruiter:	Beth Hulse
Publicity:	Deborah T. Smith
Information:	Raymond L. Bridge
Broadcast:	David Vannell
Press Operations:	Diane Decker/Dixie Lee/ Nancy Jenkins/Kent Miller/ Marcia Evans
Electronic Publication:	Russell Forte/Judy Rude
Exhibits:	Larry Sullivan/Bill Boyer
Art Direction:	Julie Olson/George Avalos
Printing:	Richard A. Truesdale
Logistics:	Ralph L. Dillard/Cheryl Reese

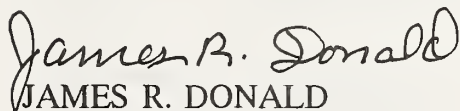
PREFACE

These pages contain speeches presented during Agriculture Outlook '94, the U.S. Department of Agriculture's 70th annual agricultural outlook conference. The conference was held at USDA headquarters in Washington D.C. on November 30 and December 1, 1993.

This book is organized by order of presentation during the conference, and includes all speeches and illustrations submitted by speakers. On the opening day, Secretary of Agriculture Mike Espy and other top officials discussed new priorities for agriculture, as well as policy issues affecting U.S. agriculture, farmers and other rural Americans, land and water, food safety and nutrition. The sessions were televised over satellite. On the second day, experts from government and the private sector presented their views on the 1994 outlook for farm commodities, food prices and the agricultural economy.

Readers are referred to audio tape cassettes of each session for a complete verbatim record. Video tape cassettes are also available for some sessions. A cassette order form can be found at the back of this book.

To purchase additional copies of this Proceedings, call 1-800-999-6779 or write ERS-NASS, 341 Victory Drive, Herndon, Virginia 22070. For further information on the conference contact Raymond L. Bridge, information officer, at (202) 720-5447.



JAMES R. DONALD

Chairperson

Outlook Conference Steering Committee

World Agricultural Outlook Board, USDA
Washington, D.C. 20250-3900

January 1994

Schedule at a Glance

Monday, November 29, 1993

	South Building Seventh Wing	South Building Training Center
1:00-5:00	Early Registration	Technology Exhibit

Tuesday, November 30, 1993

Jefferson Auditorium

9:00	Secretary's Keynote and 1994 Outlook Issues
10:30	Break
11:00	Farm and Rural Perspectives on the Outlook
12:00	Lunch on your own Secretary's Press Conference
1:15	Environmental Issues for 1994 and Beyond
2:45	Break
3:00	Food Safety and Nutrition Issues for 1994 and Beyond
5:00	Adjourn
5:15	Conference Reception

Wednesday, December 1, 1993

	Jefferson Auditorium	Cafeteria Meeting Room	South Building Training Center	Room 107 Administration Building	Holiday Inn Crowne Plaza at Metro Center
7:45			Continental Breakfast		
8:30	U.S. and World Agricultural Outlook for 1994				
9:15	U.S. and World Food Grains Prospects	Dairy Prospects and Future Demand	Forest Products Outlook, 1994 and Beyond	Food Prices and Retail Demand Prospects	
10:30	Break				
10:45	U.S. and World Feed Grains Prospects		Greenhouse, Turfgrass and Nursery Outlook	Farm Business and Household Income: Outlook and Issues	1994 Cotton Prospects
12:00	Lunch on your own				Cotton Luncheon: Hill Views
1:30	Analysts Size Up the Oilseeds Complex	Fruit and Vegetables Outlook, Minor Use Chemicals	What's in Store for Tobacco?	Briefing: Health Care Reform Outlook for Rural America	Crop Weather Briefing; Ag. Meteor- ology Open House (5140 South Bldg., repeats at 3:15)
2:45	Break				
3:15	Livestock and Poultry: '94 Outlook and Industry Trends		Developing Export Markets for Aquaculture		U.S. and World Sweeteners Outlook in a Dynamic Marketplace
4:30	Adjourn				
5:15					Sweeteners Reception and Dinner with Guest Speaker

CONTENTS

Session	Speaker and Topic	Page
 SESSION 1: SECRETARY'S KEYNOTE ADDRESS AND 1994 OUTLOOK ISSUES		
	Mike Espy, Secretary of Agriculture's Keynote Address	1
	Keith Collins, The 1994 Agricultural Outlook and Underlying Issues	8
	Eugene Moos, Agricultural Trade Outlook and Issues	17
 SESSION 2: FARM AND RURAL PERSPECTIVES ON THE OUTLOOK		
	Richard L. Gady, Private Sector Perspective on the Agricultural Outlook and Issues	25
	Karl N. Stauber, Rural Development Issues	32
 SESSION 3: ENVIRONMENTAL ISSUES FOR 1994 AND BEYOND		
	Joan M. Comanor, Ecosystem-Based Management at the Public-Private Land Interface . .	37
	Diane E. Gelburd, Ph.D., Implementing Ecosystem-based Management in the Soil Conservation Service-What Does it Mean for Land Users?	42
	Geoffrey Grubbs, Approaches for Addressing Non-point-source Pollution. No text; refer to audio tape.	
	John P. Burt, Agriculture's Role in Addressing Nonpoint Source Pollution	47
 SESSION 4: FOOD SAFETY AND NUTRITION ISSUES FOR 1994 AND BEYOND		
	Patricia Jensen, Food Safety Initiatives for 1994 and Beyond	53
	Dr. Stephen A. Ziller, Food Industry Perspectives on Food Safety and Nutrition	60
	Ellen Haas, Food and Consumer Services: Agenda for the Future	65
	Marion Nestle, Ph.D, MPH, The Nutrition-Health Connection: USDA Dietary Guidance Policies	71
	Michael F. Jacobson, Ph.D., USDA's Responsibility to Consumers	78
 SESSION 5: THE U.S. AND WORLD AGRICULTURAL OUTLOOK FOR 1994		
	James R. Donald, U.S. Agricultural Outlook	84

Session	Speaker and Topic	Page
SESSION 6: U.S. AND WORLD FOOD GRAIN PROSPECTS		
	Craig Jagger and Sara Schwartz, The Prospects for U.S. Wheat in 1994	107
	Andrew B. Bellingham, The World Wheat Situation	138
	David R. Graves, The Outlook for Rice. No text; refer to audio tape.	
SESSION 7: DAIRY PROSPECTS AND FUTURE DEMAND		
	James Miller, Outlook for Dairy	146
	Ken Bailey, Future Prospects for the Midwest Dairy Industry	150
SESSION 8: FOREST PRODUCTS OUTLOOK, 1994 AND BEYOND		
	Henry Spelter, Forest Products Outlook	158
	Dr. H. Fred Kaiser, Forests and Timber Supplies in the 21st Century	167
SESSION 9: FOOD PRICES AND RETAIL DEMAND PROSPECTS		
	Ralph L. Parlett, The Outlook for Food Prices in 1994	179
	Paul T. Prentice, Ph.D., Food Prices and Retail Demand: A Macroeconomic Perspective	185
SESSION 10: U.S. AND WORLD FEED GRAINS PROSPECTS		
	Thomas F. Tice and Peter A. Riley, USDA 1994 Outlook for Feed Grains	193
	John Stewart, The Decline of Export Corn Merchandising	201
	Pete Wenstrand, Producer Views and Perspectives. No text; refer to audio tape.	
SESSION 11: GREENHOUSE, TURFGRASS, AND NURSERY OUTLOOK		
	Doyle C. Johnson, Financial Performance Trends and Economic Outlook for the U.S. Greenhouse, Turfgrass, and Nursery Industries	212
	Gerardus ("Ger") van der Made, New Challenges in World Horticultural Markets	229
	Drew N. Gruenburg, Major Legislative and Regulatory Issues Impacting the U.S. Floriculture and Environmental Horticulture Industry	236

Session	Speaker and Topic	Page
SESSION 12: FARM BUSINESS AND HOUSEHOLD FINANCE, OUTLOOK AND ISSUES		
Robert G. McElroy and Charles Dodson, Issues and Outlook for Farm Business Finance		242
Janet E. Perry, Farm Household Outlook: Reliance on Farm Income Depends on Size of Farm		252
James Ryan and Kenneth Erickson, Outlook for Changes in Farm Financial Performance		261
SESSION 13: 1994 COTTON PROSPECTS		
Robert A. Skinner, Leslie A. Meyer, and Stephen MacDonald, Outlook for Cotton		270
Keth Henley, Ted's Demise		279
Carlos Moore, Trade Opportunities and Threats for U.S. Textiles		284
SESSION 14: COTTON LUNCHEON: HILL VIEWS		
Howard "Chip" Conley, Chief Economist, Policy Issues for 1994. No text; refer to audio tape.		
SESSION 15: ANALYSTS SIZE UP THE OILSEEDS COMPLEX		
Nancy Morgan and George Douvelis, The Outlook for the Oilseeds Industry: Forecasting is Never Easy		293
Sara Wyant, Five Challenges for Soybean Growers in the 1995 Farm Bill		306
Michael V. Krueger, Industry Views and Perspectives - Oilseeds		311
SESSION 16: FRUITS AND VEGETABLES OUTLOOK; MINOR USE CHEMICALS		
Dennis A. Shields, 1994 Outlook for U.S. Fruit and Tree Nuts		317
John M. Love, U.S. Vegetable Situation and Outlook		326
Howard R. Wetzel, The U.S. Fruit and Vegetable Export Situation		332
Daniel A. Botts, The Outlook for Minor Use Chemicals and Their Alternatives		341
Paul H. Schwartz Jr, Comment on the Outlook for Minor Use Chemicals and Their Alternatives. No text; refer to audio tape.		

Session	Speaker and Topic	Page
---------	-------------------	------

SESSION 17: WHAT'S IN STORE FOR TOBACCO

Verner N. Grise, Outlook for U.S. Tobacco	345
Daniel J. Stevens, Foreign Outlook for Tobacco. No text; refer to audio tape.	
Danny McKinney, Grower's Perspective on the U.S. Tobacco Outlook. No text; refer to audio tape.	
Murray W. Jones, U.S. Tobacco Outlook From One Cigarette Manufacturer's Perspective	351

SESSION 18A: BRIEFING ON HEALTH CARE REFORM OUTLOOK FOR RURAL AMERICA

This special event is not included in the proceedings. For further information, contact the presenter, Dena Puskin Sc.D, Deputy Director, Office of Rural Health Policy, Health Resources and Services Administration, U.S. Department of Health and Human Services, Room 905 Parklawn Building, 5600 Fishers Lane, Rockville, MD 20857; 301-443-0835.

SESSION 18B: CROP WEATHER BRIEFING AND AGRICULTURAL METEOROLOGY OPEN HOUSE

This special event is not included in the proceedings. For further information, contact Ray Motha, Supervisory Meteorologist, Joint Agricultural Weather Facility, World Agricultural Outlook Board, U.S. Department of Agriculture, Room 5143 South Building, Washington, DC 20250-3800; 202-720-9807.

SESSION 19: LIVESTOCK AND POULTRY: 1994 OUTLOOK AND INDUSTRY TRENDS

Steve Reed, Outlook for Red Meat and Poultry	357
Bruce Ginn, Emerging Trends in the Red Meat and Poultry Industries	365

SESSION 20: DEVELOPING EXPORT MARKETS FOR AQUACULTURE

David J. Harvey, Outlook for U.S. Aquaculture	385
Joseph P. McCraren, Aquaculture is Agriculture	392
Joel Chetrick and Steve Beasley, The Evolving Role of the Foreign Agricultural Service in Seafood Promotion	395

SESSION 21: U.S. AND WORLD SWEETENERS OUTLOOK IN A DYNAMIC
MARKETPLACE

Edmond Missiaen, The U.S. Sugar Outlook	399
Craig Jenkins, Developments in the Global Sugar Industry	403
David Berg, Beet Sugar Economics - Then and Now	406
Fred Sammis, Comment on Dynamic U.S. Sweeteners Markets. No text; refer to audio tape.	
Farideh Bromfield, Dynamics of the World Sugar Market	413
Rod Boltjes, Comment on Dynamic World Sweeteners Markets. No text; refer to audio tape.	

SESSION 22: SWEETENERS DINNER

Leonard Condon, Update on Trade Negotiations. No text; refer to audio tape.	
---	--

**See last page for information on ordering
audio and video cassette tapes.**

Outlook '94

Tuesday, November 30, 1993

KEYNOTE ADDRESS AT THE 1994 OUTLOOK CONFERENCE

**Remarks by
Mike Espy, Secretary of Agriculture**

To all of those who work here at the USDA, to all of you who are here from around the country and literally from around the world, to all of you listening by satellite, I am delighted along with Deputy Secretary Richard Rominger and others to welcome you to our 7th annual Outlook Conference where we take time to pause and reflect on Agriculture's past, but more importantly where we cast a reflective, visionary scan towards Agriculture's future.

There are a number of things I would like to cover today, a number of things that will be covered by the others who will be appearing in the program throughout the day.

There are many things going on here at the USDA--our new Team USDA. Number One, we have a reorganization plan we have been working on literally since the first day we arrived in February, a reorganization plan where we hope to change the culture of USDA's bureaucracy, where we hope to change the focus from one of acronym to one based on mission, where we would like to go from 43 divisions to 30 divisions, where we would like to achieve savings of about \$2.6 or \$2.7 billion over the next five years, where we would like to achieve a reduction of personnel by 7,400 and one that, hopefully, will be debated by the Senate Agriculture Committee when they return on January 25th, to be marked up and passed on to the Senate floor. We are ready for that and we are eager for that process to continue.

Another project that we have been working on literally since day one is to attack this E-coli critter and other deadly pathogens that have caused death and destruction to many U.S. families, because their children had the audacity to show up at local fast food restaurants and had the audacity to eat a hamburger. We are intent on changing our entire food inspection system and changing its culture, if you will, to reform from a system based on organoleptic methodology to one based more on science and microbiology.

We are also very insistent on incorporating healthier foods into our school meals which feed about 25 million children everyday.

We are also very active in the area of crop insurance reform, where we can focus on a proposal that allows for greater participation. We want a system that is certainly actuarially sound, one that is practical for farmers and includes preventive planning features and catastrophic features and one that constitutes a very affordable, very good, new policy.

We are busy cleaning up after the great flood of 1993. We are working with the Soil Conservation Service, the Army Corps of Engineers and FEMA and others to move towns out of the flood plain, where the majority of the citizens wish to move and where we are intent on cleaning levees and cleaning up areas where five and six feet of silt and sand were deposited by the great Mississippi River.

Even though we are moving towns and even though we are building levees and dikes, we also realize that, on very sober reflection, we ought to look at some of the innovative proposals and programs that we have within our current arsenal, programs like the conservation reserve program and the wetlands reserve program.

I just recently returned from a three-day trip to Iowa and Missouri where I endorsed a proposal to buy out, several farmers who owned jointly about 3,000 acres of what used to be prime cropland within the flood plain. We wish to with a money purchase by the Soil Conservation Service to ally ourselves with conservation groups from around the country, to offer a pretty good fair market value price to farmers to allow this land to be purchased and placed in permanent reserve. This is land, ladies and gentlemen, that has flooded 16 times in the last 20 years.

We realize that this land, if the deal goes through, is a win-win situation for everyone involved. The Federal Government doesn't have to have continuous outlays to rebuild levees. The local levee districts no longer have to bother with their share of that cost being passed on to their constituents. The migratory birds, of course, have something to say about it. The farmers don't have to suffer continuously from a very nervous condition called "looking up to see whether it is going to rain forever."

That is a proposal that I hope will be accepted and one, if it is accepted, that will serve as the model for what we hope to do when necessary and if possible, all along the Mississippi River Basin.

The other proposals, of course, that you have read about called EBT, Electronic Benefits Transfer, we hope to change the whole process of delivering food stamps and moving into the new century, moving from a system based on vouchers and coupons to one based on ATM cards, where the welfare recipient can just punch in the PIN number at the local Safeway or Giant and draw down on the account that is already set up for him or her.

So, there are a number of things going on here at the USDA. I've been quite busy in my 11 months here, literally from traveling the second day after I was sworn in to the Pacific

Northwest to attend to the E-coli tragedy, to corn problems in Michigan, to potato problems in Maine, to cotton problems in Arizona, medfly problems in California.

In fact, someone stopped me the other day to ask, "Well, how long have you been Secretary?" I said, "Ten and a half months or so. They said, "Now, correct me if I'm wrong, but we have had some kind of a crisis each and every month since you have been Secretary." I said, "Well that might be true." They said, "How long is your term?" I said, "Another three years." They said, "We don't know if we can stand you another three years."

There are a lot of things happening here. The fact is, among all the programs that I have mentioned and that will be mentioned later on in the day, among the myriad of departments and divisions we have here in our 43 divisions with our \$71 billion budget, with our 110,000 employees it could be argued that one of the most important things we do and certainly the first among equals is this matter of farm programs and making sure that we can wring every bit of farm income and improving of cash receipts out of the programs that we are privileged to administer. It has been our long-held view and our view that, it is increasingly evident that the best way to attend to this farm income dilemma is to seize opportunities that present themselves within the export market.

That is why the recently completed trip to China, Hong Kong, Japan and the other Pacific Rim countries to me was so important. That is the wave of the future. Billions of consumers are becoming more sophisticated and diets diversifying, all hopefully willing to take advantage of what we can grow here within the United States, both in regard to bulk product and value added. I would call that trip very successful, because we were able to engage our Japanese friends, to discuss with them this attitude that we find rather intransigent, to horse step this import barrier to rice and other products which we and other nations grow. Fortunately for me, we had an earthquake the night before I was to meet my counterpart, Minister Hata [phonetic].

Now, I got my law school degree in California and out there they have earthquakes as a normal course of experience, but it was my first earthquake, I've got to tell you. It was my first trip to Japan and my first earthquake. Even though it was a number four on the Richter Scale, I can tell you that it was a number ten on my personal Richter Scale.

That afforded for me a prop, if you will, or a circumstance that I could use much better than anything that I could manufacture. I engaged my Japanese friend the next day and I told them that, as smart as we humans think we are and as ingenious as we envision ourselves to be, the fact is Mother Nature will always intervene. There will always be some unforeseen circumstances, so these finely calculated methods like self-sufficiency and food security can never be truly guaranteed. We will always have a flood. We will always have an earthquake. We will always have a drought at some time or another. So, therefore, the only way to assure full and true and valid food security is to open the markets and drops the barriers and allow the people that you love to take advantage of the world's storehouse.

Perhaps, because of that episode and perhaps because of others, certainly because of a typhoon they had that shorted their crops two million tons, we have seen some movement lately in dropping the import ban on rice. We have been moving some U.S. rice lately and, hopefully, we will have continuous movement there.

Then we went on to Japan and Hong Kong. There, the message was the same: Reduce the tariffs, eliminate the non-tariff barriers. Reduce or eliminate these objectionable phytosanitary problems that we have that frustrates free trade. So, for me, it was an incredible trip and hopefully we will continue to see some benefit from it.

I have been in 11 months to about 40 states, sometimes one more than others, as you can imagine, Texas perhaps six or seven times, the upper Midwest 16 times since July 2nd. I have had a chance to visit some countries and I leave tonight to go to Brussels and to go to Geneva to help Mickey Kantor and others who will be leaving earlier today on another assignment, one that continues our approach to seize opportunities that are evident in the export market.

So, I would very briefly like to talk about two events, one we have recently completed. Of course, that is the NAFTA and the one that we have yet to complete, but one which I think will be completed by December 15 and that, of course is the GATT.

The passage of the North American Free Trade Agreement by the U.S. House of Representatives is a positive economic step forward for the United States and for U.S. agriculture. NAFTA, of course, will expand exports to this growing Mexican market. As trade barriers are phased out between the United States and Mexico, U.S. exports will increase. After full implementation, annual U.S. agriculture exports are projected to increase by \$2.6 billion above what would be otherwise the case, with increasing impacts to cash receipts and farm income.

With U.S. farmers increasingly dependent on export markets for income, which currently accounts for about 20 percent of farm product and one out of every three acres of cropland, the NAFTA is a very important movement toward improving farm income.

We now turn to another crossroads regarding trade and U.S. exports as we continue to push hard for the conclusion of a successful Uruguay Round Agreement by December 15th. The Uruguay Round, as you know, was initiated in 1986, well before the U.S., Canada and Mexico agreed to negotiate NAFTA. Because the contracting parties to the GATT realized the importance of reducing trade barriers and expanding global trade very significantly, our trading partners agreed that agriculture, for the first time, since the beginning of the GATT in 1948, would be dealt with in a comprehensive manner in the Uruguay Rounds.

The U.S. has been a driving force to see to it that agricultural trade barriers, market access, trade distorting internal supports, export subsidies and phytosanitary regulations are treated comprehensively.

We have come a long way since 1986 and now it is time to conclude the Uruguay Rounds. U.S. farmers have a bigger stake in a successful Uruguay Round than ever before, because they have become more dependent on trade for income as federal budget support has declined.

I served in the Congress for seven years. I served on the Budget Committee for that entire time. I served on the Agriculture Committee and I have seen the handwriting on the wall. U.S. budget support to agriculture will continue to decline. We can scream. We can curse. We can lambaste and sometimes even cause some delay in the inevitable. The fact is, U.S. budget support for agriculture will continue to decline.

That is why we have to seek opportunities in the export markets and use our mechanisms that we have both as a sword and as a shield, whether it is Export Enhancement Program (EEP) or whether it is Market Promotion Program (MPP). We have to continue. Without continued income growth, farm income will stagnate and decline. We know this from history.

During the 1950s, exports stagnated. Crops surpluses mushroomed and we had to implement PL 480 and other programs to boost our flagging export demands. During the 1970s, farm income grew rapidly, driven by exports mainly. The 1970s period was called the period of export euphoria. Farm exports increased from \$7.3 billion in 1970 to \$41 billion by 1980. The financial stress of the 1980s and the crash in equity values largely resulted from the inability to sustain the export growth of the 1970s. If the 1980s had seen half of the export growth of the 1970s, then farm income would have gone through the roof.

So, we continue to be reminded of the importance of exports to farm income as government support declines. In 1986, farm income was about \$48 billion and government outlays were at a record \$26 billion and farm exports were at about \$26 billion. In contrast, farm income in 1992 was nearly \$57 billion. Farm exports were over \$42 billion and federal outlays were about \$10 billion.

Given the budget reality as reflected in the 1985 and 1990 Farm Bills and budget legislation we have seen recently, open markets and unrestricted worldwide trading opportunities have become critical to the economic health of U.S. farmers and to U.S. agriculture.

The Dunkel final act is a historic, multilateral step toward the liberalization of world agriculture trade. More recently, the Blair House Agreement negotiated to meet EC concerns so that the Uruguay Round could be completed calls for some changes in the Dunkel final act, changes in the internal disciplines and internal supports and export subsidies. But there is a clear commitment to deal with an objective.

The Blair House Agreement did not address market access and meaningful market access is the remaining objective to be achieved in the Uruguay Round. In fact, a conclusion of

the Uruguay Round for agriculture awaits only a market access agreement that truly, truly expands market access. For U.S. farmers, as I've said before, increased market access means the opportunity to sell more and to receive higher prices and, therefore, income.

So, the United States is committed to completing the Uruguay Round simply because U.S. farmers need growing export markets if they are to earn more of their income from markets and operate their businesses more efficiently. We all benefit from an agricultural sector that can fully use its productive capacity. The trade barriers around the world distort trade and limit the ability of U.S. farmers to compete and do what they do best, produce the food and fiber for this nation and for the world.

We can't grow the domestic economy fast enough to take advantage of the steady increase in farm productivity. So, the Uruguay Round is critical to create markets for U.S. farmers. We know that it won't solve all economic problems in U.S. agriculture. That is why I have talked about other things.

We shouldn't be afraid to pursue elements like the NAFTA. We shouldn't be afraid to even move southward to some of the other Latin American countries. We shouldn't be afraid to support the active use of ethanol. We shouldn't be afraid to make sure that we can move towards non-food uses of crops that we grow. We're going to try to do it all. Neither should we be afraid to look inside the Farm Bill and with every bit of discretion that we have available given to us by the Congress, we ought to use it to have a meaningful and valid impact on improving farm income and we are going to do that more than we have before.

Again, the economic stakes of U.S. farmers are much greater in the Uruguay Round than even under NAFTA, because of just the sheer size difference between the Mexican market of 90 million consumers and the market of 5.1 billion people outside of North America. It demonstrates the importance of a multilateral trade agreement that reduces trade barriers on a global basis. There is a nearly \$19 trillion economy outside of North American, nearly 65 times larger than the Mexican economy.

So, we are there and we are moving more forcefully to completing the Uruguay Round.

In addition to market access, the Uruguay Round also covers export subsidies and internal support. For many U.S. farmers, export subsidies, especially in the European Community, have retarded exports and income over the past decade. The EC's high domestic price protected by variable levies on imports spurs large increases in production and the resulting surpluses were dumped on world markets with export subsidies. As a result, the EC changed from an importer to an exporter for many commodities including grain, beef and dairy products.

For example, since the mid-1970s, the EC changed from a net importer of 25 million tons of grain to a net exporter of 27 million tons of grain. This net change in world grain trade of 52 million tons is a loss of export markets equivalent to 25 or 50 million acres of U.S. crop

lands. So, the Uruguay Round Agreements would go well beyond disciplining existing import barriers, internal supports and exports subsidies.

Perhaps even more important for the future is the discipline that the Uruguay Round would apply to countries who might otherwise choose the direction of closed markets, production reducing internal supports and subsidized exports. Countries often become more protective of their domestic agricultures as their economies develop. It is easy to imagine how global agricultural trade would stagnate if many of the other countries whose economies are developing follow a protectionist path.

We already sell over 40 percent of farm exports to developing countries, which have the most market potential as their populations and their economies grow. It's sort of like a pathway. It is a model. It is just a way to keep things on course.

So, NAFTA is all about expanding trade opportunities. The Uruguay Round has the same objective but, ladies and gentlemen, the stakes are much higher. A successful Uruguay Round would not only offer discipline in existing trade barriers and restrict future trade restrictions, but it will also confirm a global commitment to more open and thorough world agricultural trade. That has long been the U.S. objective, because we know that U.S. farmers can compete in international markets where government intervention is limited.

As I conclude, I just would remind all of you that, Mickey Kantor is on his way there. I will be there shortly. We should not be afraid to say no to a bad agreement. After all, no agreement is better than a bad agreement. So, we should not be reticent at all to say no to a deficient agreement, one that offers no improvement, offers no true export promoting opportunity, one that truly doesn't level the playing field and one that retards U.S. growth in farm income.

Failure of the Uruguay Round would threaten not only export expansion for U.S. farmers, but current trade as well at the same time they are becoming more dependent on markets and government support is declining. So, the next few weeks are critical, if the Uruguay Round is to be completed by December 15th.

We will work tirelessly to achieve success and to reform this USDA that we love and as President Lincoln called the people's department. We will transform it into one that demonstrates our intent to become more farmer- friendly and more consumer aware, but certainly one that promotes farm income. The only way to do that is by forcing and prying open these very closed markets, by challenging our friends toe to toe. That is the only way to improve farm income over the long run and we are just adamant to make sure that it is done.

Thank you very much.

Outlook '94, Session #1

For release: Tuesday, November 30, 1993

THE 1994 AGRICULTURAL OUTLOOK AND UNDERLYING ISSUES

Keith Collins
Acting Assistant Secretary for Economics
U.S. Department of Agriculture

Welcome to USDA's 70th outlook conference. This morning, I will provide an overview of the 1994 agricultural outlook and interpret some of the factors that will shape agricultural markets and overall economic performance. I will focus on the domestic side and Gene Moos, up next, will emphasize the international side.

The Global and Domestic Macroeconomies

When economists look ahead, they often chart a course that deviates at most modestly from where they now are. But whenever we look back, we see the actual yearly changes in agricultural markets that move well beyond our range of projections. Our markets have been recently subjected to political upheavals, policy shifts, macroeconomics, and, of course, weather--including floods, droughts, and typhoons--all within the last 6 months alone.

It is appropriate to begin our two days of outlook discussion by asking what are the likely macroeconomic developments that will provide the backdrop for U.S. agriculture in 1994? The central point is that 1994 is shaping up to produce an unusual U.S. combination--fairly high economic growth combined with low interest and inflation rates. U.S. economic growth in 1994 is likely to exceed 3 percent and be the highest since 1988, 6 years ago.

A broad array of indicators is pointing toward strong fourth quarter real GDP growth, which is expected to carry into 1994. The strength is, and will be, fueled by consumer and investment spending, which is overcoming the dampening effect of no net export growth and slowed government expenditures. Strong growth in personal income and lower unemployment is generally good for food and fiber demand, but in the coming year, will be particularly helpful in absorbing large meat supplies that are expected, and thereby act as a foundation for grain and livestock prices.

Interest rates remain near 30-year lows and inflation in check, helping to stabilize farm production expenses for several years. Inflation should remain near 3 percent in 1994. However, with demand for credit up, interest rates are expected to rise in 1994, with short-

term rates up about 1 percentage point by year end, adding \$0.5 to \$1.0 billion to 1994 farm interest expenses.

On the international side, economic growth will also support farm demand. The zero-to-negative real GDP growth in 1993 among the developed countries is likely to be replaced by slow to moderate recoveries. Growth in Japan and the Western European nations is expected to be positive but weak. The nations of the Former Soviet Union and Eastern Europe face another year of negative economic growth, but less so.

On balance, the fundamental macroeconomic factors bearing on farm well-being are favorable:

- Consumer income and spending are rapidly expanding, adding to food and fiber demand,
- Interest rates and inflation are low, helping to control farm production costs,
- Overseas, improving real GDP growth is likely and any rise in the value of the dollar will be small and not impair U.S. export competitiveness.

State of Farm Economy

The second backdrop relevant for evaluating the outlook is the state of the farm economy as we now know it. Our financial surveys of farms taken following last year's record harvests indicated signs of gradual and steady improvement since the mid-1980's. For example, the average debt-to-asset ratio of farmers declined from 23 percent in the mid-1980's to 16 percent at the start of 1993, as debt levels were reduced and asset values rose steadily. U.S. farms in the most severe category of financial stress--those most vulnerable to bankruptcy because of low income and high debt-to-assets--declined from 10 percent of all farms in the mid-1980's to 5 percent at the start of 1993.

Unfortunately for farmers, much of the improvement came by 1989 and the overall change since has been much smaller. Even so, as U.S. farmers approached the 1993 growing season, record high cash receipts in 1992 and 1993, high livestock prices, low interest rates, several new export promotion packages, and an improving global economy presented a picture of an agricultural economy showing stability and ready to continue a slow but steady path toward financial improvement. Although Winston Churchill wasn't thinking of agriculture when he said, "No victory is final and no defeat is fatal," his line applies to the dramatic change in the farm outlook precipitated with the advent of rains and the subsequent 1-in-more-than-100-year floods.

The index of crop production in 1993 dropped 13 percent from 1992. Because the drop was concentrated in the flood areas, the production losses have drawn attention to the financial status of Midwest farms. Here is how things looked there coming into the 1993 season. About 15 percent--1 in 6--of commercial-size (\$40,000 or more in annual sales) farms in the 9 flood-affected midwest states fall into one of two categories: 1) they were highly leveraged

(debt-to-asset ratios above 40 percent), making them very susceptible to income losses or 2) they were highly leveraged and had negative net farm income. Another 20 percent of midwest farms had income losses in 1992, but relatively low debt levels.

The financial condition of farmers varies considerably across the 9 midwest states. Financial stress is greatest in Minnesota, Kansas and South Dakota. Many of the farms that make up the 15 percent of midwest commercial-size farms in difficult condition have probably been in this condition for a couple of years. Consequently, the flood losses could affect a large number of farms simultaneously and are of national concern.

Farm Markets in 1993/94

Let's turn briefly to the 1993/94 prospects for crops and livestock. The past two years demonstrate how dramatically weather can change the outlook. In 1992/93, farmers produced a 9.5-billion-bushel corn crop, causing carryover stocks to increase by over 1 billion bushels. Prices fell 13 percent from the previous year. Larger supplies of good quality corn and lower prices led to a 9 percent increase in feed use and a 5 percent increase in exports.

In contrast, our November estimate placed the 1993 corn crop down about 3 billion bushels from last year and the soybean crop down about 350 million bushels. These figures represent a 31 percent year-to-year decline in corn production and a 16 percent decline in soybean production. This is a remarkable about-face. One year ago, corn stocks were increasing by over 1 billion bushels and corn farm prices were dropping. Now, this year's weather will plunge 1993/94 corn carryover stocks to the lowest level since the 1975/76 season and soybean stocks to the lowest level since 1977/78.

Our last acreage and yield survey indicated that 8 million acres of corn and soybeans were not planted or destroyed due to wet weather of flooding. The lost production on these and other acres for corn and soybeans alone is valued at \$5 billion.

Reduced corn supplies, lower quality, and higher prices are expected to reduce feed use by 8 percent and exports could be down 19 percent this year.

Crop prices have generally increased in response to 1993-crop reductions. In addition to corn and soybeans, production of wheat, rice, barley and oats are all down. Compared with one year ago, cash corn prices are up about \$0.70; soybeans, up \$1.20 per bushel; and wheat, about the same despite larger stocks. Weather has also reduced this year's cotton crop below expectations and prices are up about 5 cents per pound. For rice, lower production in Japan and China are expected to increase U.S. rice exports and prices. Farm-level rice prices in 1993 are at their highest level since the early 1980's.

Having operated since 1989 under fairly stable yearly average prices for corn and soybeans, livestock producers now face much higher feed costs. The cushion of stocks and what might

be called "bargain prices" derived from 1992's exceptional crop yields are now gone, replaced by tight stocks, lower grain quality, higher prices and, in some areas, poor hay supplies.

Had we not had the so-called "bonus billion bushels" from 1992's record feed grain yields, livestock producers would now be initiating heavy liquidations in their herds, leading to larger increases in retail food prices in the latter half of 1994 and in 1995. Instead, most livestock producers appear to be riding out the feed price runup with little herd liquidation but with shrinking margins throughout the livestock-meat marketing channels.

Beef production is expected to be up sharply this quarter and into the first half of 1994, reflecting earlier feedlot placements that put the numbers of cattle in feedlots this fall at the highest levels since 1978. Pork production this year has been below a year ago and, with higher feed costs, about the same production is expected in 1994. Poultry production is expected to be profitable and up again in 1994. For the 1994 year, increases in beef and poultry are expected to result in a 3 percent rise in total meat production, compared with 1993's 1 percent.

Over the next two days you will hear much more detail about markets for livestock and all other farm products.

Commodity Programs

Let's turn briefly to the 1994/95 crop outlook, starting with a few words on commodity policy. The 1994 year will mark a first. Since acreage reduction programs (ARP's) were first authorized in the 1981 Farm Bill and began with the 1982 crops, 1994 will be the first year that the ARP's will be 0 percent for wheat, corn, sorghum, barley, and oats.

The reduction in the corn ARP from a preliminary level of 5 percent to a final 0 percent merits comment. First, since the Secretary announced the preliminary corn ARP of 5 percent back in September, our estimate of feed grain production this year has decreased by over 9 percent. The low production and low stocks have made the feed-livestock economy highly vulnerable to bad weather in 1994. The ARP reduction to 0 percent will not restore all the lost feed production, but it moves grain consumers a step back from the edge. It will enable corn producers to plant an additional 3 million acres in 1994, which with a return to more normal weather, would raise 1994 production by about 225 million bushels, or about 3 percent, compared with a 5 percent ARP.

A second point is that the ARP change will raise corn sector income and economic activity generally. A smaller ARP may mean a little lower prices than otherwise, however, being able to plant and receive market income and program benefits on more acres offsets any price effect. We estimate that the ARP change will raise corn sector net income by over \$200 million. For a farm with a 250-acre corn base and 105 bushel program yield, reducing

the ARP from 5 to 0 percent increases gross income by an estimated \$3,475 and net income by an estimated \$1,740.

A third point is that the reduction in the ARP from 5 to 0 percent will also benefit producers, who are unable to plant because of this year's flooding in the Midwest. These producers will be able to enroll in the 0/85/92 program in 1994 and any producer who can't plant because of flooding will have their base protected. Acreage eligible for payments will increase by 6 percent compared with a 5 percent ARP. For a farm with a 250 acre corn base and 105 bushel program yield that is prevented from planting in 1994 because of the floods, reducing the ARP from 5 to 0 percent will increase 0/92 payments by \$2,150.

The overall tightening of commodity markets this season increases the importance of weather for the 1994 outlook. Nearly 13 million acres of land were inundated in the 9 flood affected states. In addition excessive rains affected 40 million acres of highly erodible cropland, many of which suffered severe erosion. Rough estimates suggest some 0.5 million acres of cropland may be too badly damaged to be reclaimed. Other land that can be reclaimed may not be useable until later in 1994 and 1995. Once reclaimed, these lands cannot be expected to have a normal yield even with normal weather. We also know not all levees will be fixed in time for spring planting, making affected land subject to flooding.

The National Weather Service issued an El Nino "alert" in early October. El Nino was a contributor to the weather anomalies that have affected U.S. agricultural production the last two years. The implications for agriculture in 1994 of a continuation of an El Nino weather pattern include: continued saturated soils in the central and western corn belt with high potential for spring flooding on the Upper Mississippi and Lower Missouri Rivers; soil moisture mostly adequate to surplus over the major winter wheat crop areas; spring planting delays, and winter flooding in the southern Great Plains to the Delta regions, along with Arizona and southern California.

A review of current satellite data suggests that the potential for continuation of an El Nino weather pattern has weakened. The water in the central Pacific have cooled slightly. In addition, rainfall has increased in parts of the South Pacific Islands indicating a possible return to a non-El Nino pattern.

A third consecutive year of the El Nino weather pattern would historically be a highly unusual event. Some weather models suggest continuation, others predict an end. The National Weather Service's recent 90-day outlook through January called for colder and wetter than normal weather over the central U.S. suggesting an above normal snowpack. Above average snowfall combined with already saturated soils create a very high potential for flooding along the upper Mississippi and lower Missouri Rivers.

The Palmer Drought Index (PDI) on October 30 compared to one year ago shows three major changes. The first is the more extensive area of the Corn Belt in the unusually moist to very moist category; secondly, the percentage of the nation with severe to extreme drought

is the lowest since 1987, and third, the deep soil moisture depletion from the drought in the southern Appalachian States. However, two storms in early November produced widespread 3-5 inch rainfall significantly improving surface soil moisture, pasture growth and development of late planted winter grains in the southeast.

Outlook for 1994/95

Taking into account the program changes and the weather effects, our current estimates place 1994 corn plantings at about 79-80 million acres, soybeans at 60-61 million acres, and wheat at about 71-72 million acres. Compared with last year, corn acreage would be up about 6 million acres and soybeans would be up about 1 million, while wheat plantings would be up only slightly from last year. With normal yields, corn carryover stocks would return to between 1.3 and 1.5 billion bushels by the end of 1994/95, wheat would remain about the level expected at the end of this season and soybeans would return to between 260 and 280 million bushels. All would be adequate but not excessive levels.

The abrupt changes in production and prices this year, and expected next year, have several implications for farm income, food prices and farm program costs. For 1993, net cash farm income is up mainly due to higher livestock receipts and government payments. Crop receipts are down, even with about \$3 billion in sales of crops previously held in inventory. Net farm income, which accounts for changes in the value of inventories, could decline by \$5 billion in 1993.

A very preliminary look at 1994, which assumes a return to normal yields, indicates aggregate net cash farm income is likely to remain near 1993's level of \$59 billion. In 1994, farmers' crop cash receipts are expected to rise due to higher prices, and large disaster payments made in 1994 will limit the drop in government payments. Slight declines in livestock receipts and higher production expenses are expected. With normal 1994 yields, increases in the value of inventories could cause aggregate net farm income to rise sharply from 1993's reduced level. On a farm household level, farm income could rise by several hundred dollars both in 1993 and 1994 from 1992's U.S. average of \$4,337 per household.

Aggregate net cash farm income and net farm income--stable and pointing up in 1994--fail to provide an adequate picture for farmers affected by this year's flooding and drought. For example, the value of major field crops in 1993 is down an estimated \$2.2 billion in Iowa, but up by \$340 million in Indiana. Lost production in 1993 will reduce cash receipts in the affected states in both 1993 and 1994.

The disaster legislation passed by Congress this year will help to offset the financial effects on farmers of this year's flooding and drought. Disaster payments for 1993-crop losses are expected to total nearly \$2.5 billion.

In addition to disaster payments, farmers adversely affected by flooding and drought may have signed up for 0/92 payments and they may have crop insurance. Most producers

participating in the annual acreage reduction program, who elected to purchase crop insurance, and can reclaim their land, should be able to recover from this year's flooding and drought. Crop insurance, disaster, and 0/92 payments to a corn producer, who participated in the corn program, has crop insurance, and did not harvest a crop in 1993, are estimated to cover about 90 percent of pre-flood gross income. In comparison, the same producer without crop insurance will receive disaster and 0/92 payments totalling less than 50 percent and a nonparticipant without crop insurance will receive disaster payments equivalent to about 25 percent of pre-flood gross income. This coverage, of course, is for 1993 crop losses and does not compensate at all for future losses due to long-term land damage or losses of buildings and homes.

Regarding food prices, the consumer price index (CPI) for food rose only 1.2 percent in 1992, the smallest increase in 25 years, reflecting the low inflation rate in the general economy and the large 1992 crops. The CPI for food is expected to increase about 2 percent this year, marking the third consecutive year in which inflation in food prices has been substantially less than the overall increase in the CPI.

The 1993 weather has had little impact on the food CPI. Most of the damage involved corn and soybeans which have had little food CPI effect because these crops are inputs in meat and poultry production rather than final consumer products. Long production cycles for beef and pork have tend to retard the transmission of feed price increases to consumers. There has been nearby price reductions for hogs suggesting liquidation but futures prices have fallen little to this point. There have been monthly increases in the food CPI index for poultry since July, which is consistent with the shorter production cycle for poultry. These higher prices, however, will not have a noticeable impact on the overall CPI for food.

Retail food prices are expected to increase by 2 to 4 percent in 1994. During the first half of 1994, record meat supplies could lead to lower retail beef and poultry prices. Retail egg and fresh vegetable prices could also be down in 1994. Another contributing factor expected to help hold down the increase in retail prices is the low rate of inflation in the general economy.

The primary effects of this year's reduced grain supplies on retail food prices would begin to show up in the latter half of 1994. However, a sharp long-term reduction in meat supplies and consequent increase in retail meat prices is not anticipated. Normal weather should moderate crop prices during the latter half of 1994, giving the signal to livestock producers to continue building their herds.

Outlays for farm programs peaked in FY 1986 at \$26 billion. In both 1991 and 1992, \$10 billion was spent on farm programs. For FY 1993, large crops and relatively low prices caused farm program costs to reach \$16 billion. In FY 1994, higher market prices and reduced deficiency payments are expected to offset the increase in disaster payments, causing CCC outlays to fall by \$2-\$4 billion.

Other Developments to Watch

There are several other policy issues that have received much public attention and are areas to watch for 1994. I'll briefly mention four--NAFTA, ethanol, bST and the remaining commodity programs to be announced.

NAFTA. With the implementation of NAFTA a number of agricultural commodities will enter Mexico duty free immediately. We know there will be ample long-run gains, but what can we expect in 1994? Immediate trade expansion is expected in beef, cattle, corn and some fruits such as pears. During the first 3 quarters of 1993, U.S. beef exports to Mexico were down 37 percent and cattle exports were down 69 percent. The reductions were caused by the 15 to 25 percent tariffs imposed by Mexico in 1992. These tariffs are eliminated immediately under NAFTA and trade is expected to be restored quickly to pre-1993 levels.

Another commodity with an immediate effect is corn. Mexico's import license is replaced by a 2.5 million ton Tariff Rate Quota (TRQ) in 1994 and 2.7 million ton TRQ in 1995. We expect Mexico to import the full 5.2 million tons over 1994 and 1995, more than double the amount we would have expected had there been no NAFTA.

Ethanol. Gasohol sales now account for about 8 percent of U.S. gasoline sales. The ethanol industry has grown from 20 million gallons in 1979 to 1 billion gallons currently, using about 450 million bushels of corn.

Implementation of the Clean Air Act amendments of 1990 and the Energy Policy Act of 1992 are expected to enhance the role of ethanol in the marketplace. Last November, the Oxygenated Fuels Program began and ethanol played a major role in reducing harmful carbon monoxide in such cities as Phoenix and Denver. Demand for ethanol as an oxygenate was a major reason why we used over 1 billion gallons of ethanol in gasoline for the first time. The Environmental Protection Agency's (EPA) proposed rule for the reformulated gasoline program is expected to give ethanol, and ethanol derivatives, an opportunity to compete in the reformulated gasoline market beginning in 1995. The rule is expected to be announced in final form by December 15.

rbST. The approval of recombinant bST (rbST) means that its use will begin in the first quarter of 1994. With FDA's finding that rbST is safe for humans, animals and the environment, USDA forecasts virtually no effect on milk use. And there is likely to be little effect on milk production. About 10 percent of the nation's milk cows are expected to be receiving rbST by the end of calendar 1994.

USDA forecasts that 1993/94 milk production will rise less than 0.5 percent over 1992/93, as lower milk prices and higher feeding costs limit expansion. Surplus removals, on a total solids basis, are expected to be below 7 billion pounds, resulting in no added producer assessment.

1994 Commodity Program Developments. The 1994 outlook for upland cotton and rice will partly depend on program announcements that are yet to be made. The preliminary cotton ARP for 1994, set at 17.5 percent is subject to change. The November crop report suggested a lower figure. Next week's crop production report will be the last information on the size of the 1993 cotton crop before the final decision due by January 1. Regarding rice, strong export demand and lower 1993 production suggest an ARP at or below 1993's 5 percent. This decision must be announced by tomorrow, December 1.

Conclusion

In conclusion, my remarks have highlighted only a few of the many issues that will be explored in greater depth today and tomorrow. The U.S. agricultural economy in 1994 will face an improving economy and incomes in the U.S. but weak income growth overseas. The year will begin with generally lower marketings of field crops and fruits due to reduced production, higher prices and declining bulk exports. However, livestock and poultry production will rise and meat export prospects are up. Milk sales will decline, mainly due to lower prices. Later in 1994, reduced ARP's, except for cotton, and normal yields, are expected to boost crop production and replenish 1993's \$3 billion reduction in farm inventories.

The long run strength of the agricultural economy will depend on growth in the global economy which is intimately linked to liberalized trade. We are approaching the 1995 farm bill debate with intensified concerns about budget exposure, conservation, and environmental protection. Decisions about, the Conservation Reserve, the Clean Water Act, pesticides, food safety and nutritional safety will also affect what foods are produced, how they are produced, and how they are handled from farm to table. I hope this outlook conference provides you useful information in all of these areas.

Outlook '94, Session #1

For Release: Tuesday, November 30, 1993

AGRICULTURAL TRADE OUTLOOK AND ISSUES**Eugene Moos****Under Secretary for International Affairs and Commodity Programs
U.S. Department of Agriculture**

Let me join Secretary Espy, Deputy Secretary Rominger, and Acting Assistant Secretary Collins in welcoming you to the Department's 70th annual Outlook Conference.

It is my privilege this morning to talk about the U.S. agricultural trade picture -- where we are, our expectations for the year ahead, and some of the issues, trends, and policies that will impact on future trade.

First, the Big Picture

September trade figures were released 11 days ago, allowing us to start closing out the books on fiscal year 1993. U.S. agricultural exports for the year totaled \$42.5 billion, up slightly -- about \$150 million -- from 1992. U.S. agricultural imports also rose modestly to \$24.5 billion, leaving an agricultural trade surplus of \$18 billion, equal to the 1992 figure. This surplus, when ranked against net trade in other industry sectors, represents one of the largest positive contributions to the nation's overall trade balance.

This afternoon, the Department will be releasing its first export forecasts for fiscal 1994, the year which began October 1st and runs through next September. Although the outlook holds some significant year-to-year changes for individual products and markets, the overall forecast at this early point shows virtually no change on the value side -- exports are again pegged at around \$42.5 billion, with an agricultural trade surplus of \$18 billion. Export volume, however, is expected to drop about a tenth, reflecting reduced shipments of U.S. corn, wheat, and soybeans. Of course, we will be revisiting these forecasts periodically throughout the year, as trade data begins to accumulate.

Now, Secretary Espy has already talked about the importance of U.S. agricultural exports and the high -- the very high -- priority this Administration places on export expansion. So, where are we starting from and what do these numbers tell us in terms of the big picture?

First, we might note that exports have essentially recovered from the doldrums of the mid-1980's, when the dramatic plunge in our exports helped precipitate a major financial crisis in U.S. agriculture. The value of U.S. agricultural exports has risen more than 60 percent since the 1986 low. In nominal dollar terms, exports in 1993 were the second-highest ever, exceeded only by the record set back in 1981 -- the peak year of demand for our bulk commodities ... a year in which U.S. agricultural exports to China, Eastern Europe, and the Soviet Union reached a combined total of more than \$5-1/2 billion, compared with less than \$2-1/2 billion in 1993.

But 1993 also brought in its share of impressive numbers. For example:

- U.S. agricultural exports to developing countries set a new record surpassing \$18 billion, or 43 percent of our total farm and food exports, the highest percentage ever.
- In Asia, U.S. agricultural exports to our largest market, Japan, reached a new high, as did our exports to Taiwan and Hong Kong.
- U.S. exports to our soon-to-be NAFTA partners -- Canada and Mexico -- set a combined record of nearly \$9 billion, meaning that buyers for more than 20 percent of our total agricultural exports were found right here on our borders in North America.
- U.S. consumer-oriented exports -- everything from snack foods to meats to fruits and vegetables -- set another record (the seventh straight) at close to \$15 billion. These value-added products now account for more than one-third of U.S. agricultural exports, up from 14 percent just a decade ago.
- And, not to bombard you with "records," let me mention two commodity sectors that are included in our marketing efforts and that we are now reporting along with the agricultural trade statistics -- fish and wood products. When we combine these two categories with our agricultural exports, the total jumps to \$52.7 billion. That's the highest combined total ever, boosted by the rapid growth in U.S. forest product exports and the construction boom in Pac Rim markets.

For 1994, USDA's trade forecasts are heavily influenced by relatively weak economic growth prospects for Europe and Japan; the smaller supplies of U.S. grains and oilseeds at generally higher prices; increased production by several important competitors and importers; and major uncertainties -- at this point, diminished expectations -- regarding exports to the former Soviet Union and China. Given the supply-demand conditions, the stable forecast for export value in 1994 is evidence of the underlying strength represented by the diversity of products we export and the diversity of markets we serve ... and evidence, too, of the offsetting impact of our export programs and some important trade and policy developments in key markets such as Japan and Mexico.

Commodity Forecasts

I know, for many of you, the aggregate numbers are of little interest. The devil is in the details, and your assessment of export prospects depends largely on how your commodity will fare in world markets. I'm going to be fairly general today, leaving most of the commodity details till tomorrow's sessions, when you can raise the devil with those speakers. But let me very quickly summarize the forecasts for the major commodity sectors.

With a few exceptions, we are not looking at a strong export year for most of our major bulk commodities:

-- fiscal 1994 U.S. wheat and flour exports are expected to drop about 17 percent in volume, compared with 1993, and export value could be down more than 20 percent, reflecting lower average wheat prices. Key factors are reduced demand in the former Soviet republics and South Asia, as well as another year of weak sales to China, which harvested a record-large wheat crop.

-- Our coarse grain exports, about 80 percent of that corn, are expected to drop about 15 percent in volume, although sharply higher U.S. corn and sorghum prices reflecting our flood-reduced crops will likely leave export value very near 1993's \$5.1 billion. Reduced volume will reflect the higher U.S. prices, as well as increased competition and lower demand because of larger harvests in southern Africa, Eastern Europe, and Canada. China will chalk up a record year for its corn exports, further displacing U.S. corn in South Korea and some other Pac Rim markets.

-- U.S. oilseed exports are currently forecast to drop about 4 million tons or 15 percent from 1993's level, although higher average prices should hold value above \$7 billion. U.S. sales to the European Community (EC) will be down as grains are substituted for protein meals in EC feed rations because of the ongoing cuts in grain prices there. We will also face increased competition from expected-larger South American oilseed harvests.

-- I mentioned a few exceptions among this general pattern for bulk commodities, and the exceptions are rice and cotton. The Japanese have begun buying U.S. rice, as they promised Secretary Espy they would, and our total rice exports to all markets in the 1994 year are forecast at 2.8 million metric tons valued at \$1.1 billion, up \$300 million or more than 40 percent from 1993. For cotton, we are anticipating modest increases in export volume and value, boosted by larger U.S. supplies and increased import demand by some of the traditional exporters, such as Mexico.

-- Unlike the bulk commodities generally, the export outlook for U.S. high-value products remains upbeat. Another record year is expected for U.S. livestock, dairy, and poultry product exports, with export value forecast at \$8.5 billion. We're seeing greater demand for beef, pork, and variety meats in countries like Japan, South Korea, and Mexico reflecting

market-opening agreements, rising incomes, and the desire for more meat in the diet. Sales of U.S. broiler parts are also booming.

-- The other major high-value category is horticultural products, and here, too, we are looking at a record year for U.S. exports. The 1994 forecast is for more than \$7-1/2 billion in sales, with most of the expected \$300-million increase related to larger exports of fruits, vegetables, and juices to Canada, Japan, and the EC. Market promotion activities have been particularly effective in capitalizing on the growing foreign demand for more fruits and vegetables as part of a healthier diet.

Regional Perspectives

I want to shift now to a regional perspective, and rather than just presenting the 1994 forecasts, I will briefly look at a few of the policy issues and longer term trends. Because of time constraints, I am going to focus on just four areas -- the Americas, East Asia, the European Community, and the former Soviet states. Although every market in every part of the world is important to U.S. agriculture, these four regions together take about 80 percent of U.S. agricultural exports. Let's start close to home, with the Americas -- North, South, and Central America, including the Caribbean.

-- *The Americas*: U.S. agricultural exports within our own hemisphere now exceed \$12 billion, led by Canada and Mexico, our second and third largest single-country markets after Japan. Sales to Canada reached a record of more than \$5 billion in fiscal 1993, with consumer-oriented products dominating U.S. exports. Although this is a relatively mature market like the United States, we are likely to see further moderate growth, particularly for our fresh and value-added consumer-ready products.

But the real growth potential lies south of our border in Mexico and South America. U.S. agricultural exports to Mexico dipped slightly in 1993 (less than 1 percent) but are forecast to set a record approaching \$4 billion in 1994. Two key factors are anticipated stronger growth in the Mexican economy over the coming year, bringing higher incomes, and the PROCAMPO program announced by President Salinas in October -- a program to accelerate the shift to free-market prices and decoupled farm supports in Mexico's agriculture.

USDA analysts haven't yet factored in any short-term impact from the NAFTA, which goes into effect on January 1. Mexico's Senate ratified the NAFTA last week. But I can tell you that the NAFTA has very significant implications over the longer term. Our projections suggest that Mexico alone will be a \$10-billion market for U.S. agricultural products when the agreement is fully implemented over 15 years. And President Clinton has already articulated a broader vision of hemispheric free trade.

Latin America is the second fastest growing region in the world, and market-oriented reforms are already sweeping this hemisphere. Earlier this year, U.S. Trade Representative Mickey

Kantor announced that the United States will be seeking to negotiate additional free-trade agreements, either as part of the NAFTA or as separate bilateral accords. Chile is the first prospective candidate. I can assure you that there will be a long, careful process, considering questions of competition and other issues.

--*East Asia*: Asia is the fastest growing economic region in the world and the largest regional market for U.S. agricultural exports -- accounting for \$16 billion or nearly 40 percent of our total exports. East Asia takes close to 90 percent of these exports. Although, with a few exceptions, this region presents some of the most persistent and challenging barriers to trade, this is also where we see the greatest potential for export growth through market-opening bilateral agreements or multilateral trade reform under the Uruguay Round.

In large part because of progress in trade policy efforts, U.S. agricultural exports to Japan in fiscal 1994 are forecast to set another record at \$8.9 billion, despite continued weakness in the Japanese economy. We expect gains in rice, beef, and a wide range of high-value products sold through retail stores and restaurants. Elsewhere in East Asia, South Korea and Taiwan are both expected to purchase \$2 billion or more in U.S. agricultural exports over the coming year.

Exports to China in 1994 are forecast at only around \$300 million, half the level of two years ago, but there is a lot of uncertainty in this forecast because China has launched so many economic reforms. Longer term prospects depend on improved market access and the resolution of a number of trade issues, as well as other issues related to MFN status. Nevertheless, China potentially represents a large and growing market for many U.S. agricultural products, including wheat, protein meals, and a wide variety of value-added products.

When I visited China with Secretary Espy in October, I was particularly impressed with the developments taking place in the southern coastal plains. Incomes there are three times the national average -- there are 300-400 million people who for the first time have money in their pockets, and they are eager, hungry, for all the things that go with growing affluence. In fact, the very rapid gains in U.S. agricultural exports to Hong Kong partly reflect products going into southern China (an estimated one-third of Hong Kong's imports are being re-exported to China). Of course, other countries see these opportunities, too.

--*European Community*: The EC is a very important market for U.S. agriculture and will remain so. It is a leading market for U.S. soybeans, tobacco, feeds, cotton, tree nuts, fruits and vegetables, and other products. Our exports in 1994 are forecast to be flat at about \$7 billion. Over the next few years, however, U.S. exports could benefit from an economic recovery in the EC and from the Community's CAP reforms that should have some constraining influence on EC coarse grain exports and oilseed production. CAP reform may also slow the growth in EC wheat production.

But the most important single action by the EC will come two weeks from tomorrow, when the Uruguay Round of the GATT is scheduled to close. If the Round is successful, we will have a global agreement for trade reform. We will have an agreement that will curb export subsidies, and particularly the EC's; we will have an accord that will put disciplines on internal farm support policies, encouraging market-oriented reforms worldwide; we will have clear rules and enforcement disciplines that will help avoid unjustified trade restrictions based on contrived health and safety concerns; and we will have a market access agreement to open up markets in Asia and throughout the world without the painstaking process of individual bilateral negotiations.

--*Former Soviet Union*: Finally, let's turn quickly to Russia and the other former Soviet states. U.S. agricultural exports in fiscal 1994 are forecast at \$1.2 billion, down more than \$300 million from 1993 and less than half the value of 1992's exports to the former Soviet Union.

There is a great deal of uncertainty about trade with these countries, short and long term. U.S. export assistance will continue to play a major role for some of them. As you know, Russia has been suspended from the GSM-102 export credit guarantee program for about a year, but we are already proceeding with the required reevaluation of creditworthiness on the assumption that Russia will meet the yearend deadline for making payments on arrears. Our decision on whether to extend credit guarantees again for exports to Russia will be based on our evaluation of risk and the market potential. We have announced fiscal 1994 GSM-102 programs for Ukraine and Turkmenistan, and we have P.L. 480, title I, programs in several of the newly independent states.

Russia was once an annual market for about 20 million tons of grain alone. It is now a shrinking market, but will remain significant. On the brighter side, I might point out the Russia is now the fifth largest foreign market for U.S. snack foods, and growing -- something no one could have predicted before the collapse of the Soviet Union.

Convergence of Foreign Policy and Trade Policy

Early in my remarks, I raised the question about how U.S. agricultural exports are faring so far in the 1990's. I even commented on the rather remarkable recovery since the mid-1980's. But, now, let me give you my answer, my big-picture perspective on how U.S. agricultural exports are doing, and it is this: not as well as they should be doing, not good enough. U.S. farmers and our food industries still face too many obstacles -- the still widespread policies of self-sufficiency in food staples, government control of markets, agricultural protectionism, and unfair trade practices.

Since 1990, U.S. agricultural exports have been relatively stagnant -- a growth rate of only about 1.5 percent a year. Although most longer term projections are more optimistic, based in part on a likely recovery in economic growth abroad, what I see falls far short of an open,

dynamic, fast-growing export market that can absorb potential growth in U.S. agricultural productivity and product innovation in years ahead.

I see the risk that rising demand for farm products in the high-growth developing countries might not translate into future trade unless markets are open. If the current pressures for market liberalization are not institutionalized through the GATT or other agreements, many developing countries will be tempted to invest some of their new-found affluence in farm subsidies and protectionism. In high-income countries, there will be little protection against restrictive new food laws and regulations further inhibiting trade in consumer-oriented foods, the fastest growing category of U.S. exports.

All of this points to one thing -- the absolutely pivotal role that trade policy will play in our export future. Now, it may be premature to call the mid-November through mid-December period, as some have, the 30 days that changed the world. NAFTA is but a first step in a long-term hemispheric vision of growing trade and strong economic growth. There are encouraging signs, but no guarantee, that the Uruguay Round will close with a GATT agreement on December 15. And the APEC meeting in Seattle a few weeks ago, Secretary Espy's trip to Asia, and similar efforts are no more than a beginning to building an economic alliance with fast-growing Asian and other Pac Rim countries.

But the die has been cast. As someone who has spent his entire life in agriculture, I have seen almost a constant tension between U.S. foreign policy and agricultural trade, with agriculture typically coming in second. Well, times have changed, and this Administration has set a new direction. No longer is there the distinct separation and hierarchy that during Cold War years often put foreign policy goals at odds with agriculture's export interests. As Secretary of State Warren Christopher said recently, there is now a "seamless" connection between U.S. foreign policy and economic policy -- a connection with very positive implications for the trade policy environment. And the United States is taking a leadership role in bringing other countries along.

You might say we are stepping through the looking glass into a new world order where, for the first time in many decades, U.S. foreign policy will be defined in large part by economic and trade priorities. And because of this, agriculture now faces the most favorable policy climate for export expansion in my memory.

So what I see when I look at the export numbers is not where we have been, but where we are going. I see the long-term opportunities we can help create and the potential for stronger, sustained growth in the years ahead. And let me just emphasize that whatever happens in the Uruguay Round -- and as I said, I think we have good reason to be optimistic -- but whatever happens, we are prepared to move forward regionally and bilaterally, and we are prepared to use our program tools as needed, to continue the drive toward market liberalization and expanded trade.

Conclusion

In my remarks this morning, I have presented a broad-brush picture of U.S. agricultural exports -- where they stand, prospects for the year ahead, and some of the longer term opportunities and challenges.

Without any doubt, agriculture will continue to face many challenges in global markets. The pace of market liberalization, new production and processing technologies, the health and stability of the world economy, political relationships among nations, fiscal pressures here and abroad, environmental concerns, global humanitarian issues, food safety and quality concerns, and the growing voice and rapidly changing demands of consumers worldwide -- all these things will influence agricultural trade. If anything, agriculture around the world faces more variables, not fewer, and greater pressures to respond quickly to changing conditions.

But all of this, in my judgment, plays to the historic strengths and adaptability of U.S. agriculture -- the capacity of our farms and food industries to play a much larger role in meeting the needs of a world population that, within a few short years, will number more than 6 billion people. The opportunity to use that capacity is critical to the growth and prosperity of U.S. agriculture, and this Administration is working to make it happen.

Outlook '94

For Release: Wednesday, December 1, 1993

**PRIVATE SECTOR PERSPECTIVE ON THE
AGRICULTURAL OUTLOOK AND ISSUES**

Richard L. Gady
Vice President Public Affairs
and Chief Economist
ConAgra, Inc.

The United States food system has been pressured from many directions during the past couple of years, floods included. Issues relating to weak grain exports were well documented earlier. Grain exports have been weakened by weak world economics; furthermore a shift to demand for U.S. meat exports over the last five years has accounted for roughly 75-80 million bushels of additional corn equivalents. It is also possible that the targeting of U.S. grain carryover levels in the 1990 Farm Bill gave competitors courage to increase production since the Farm Bill specifies that the U.S. must make the production adjustments as stocks increase.

The visibility of trade has been elevated substantially by the debate on NAFTA, and the President's major battle to get NAFTA through Congress. Most of production agriculture and agribusiness were very supportive of the President on NAFTA. We feel strongly that NAFTA will generate jobs in both the U.S. and Mexico and lead to stronger agricultural exports to Mexico initially, and eventually to much of Latin America. U.S. agriculture competes very well when the playing field is level. When it is not, as is the case with the EC and Japan, our free trading spirit can be a disadvantage. We are hopeful that the NAFTA momentum carries over to the GATT negotiations and an agreement is struck by mid-December. We would encourage the Administration to remain adamant about keeping agriculture in the agreement, but to also hold the line on agriculture at the Blair House agreement. The U.S. has given up a lot from the initial Uruguay Round offer, and any further retreat would alienate much of agriculture.

Weakness in the agricultural economy has been further intensified by weak domestic demand. Real increases in U.S. food expenditures have averaged only 0.35% annually the last four years. This has been the weakest growth in food expenditures since the 1930's. Sluggish job growth, along with higher taxes and burgeoning health care expenses, have held down consumer expenditures for food. The anemic growth in consumer spending, has, in turn, pressured margins across most of the food system, leading to significant adjustments by agribusiness, which will be discussed later. Grain and livestock commodity prices, , have been negatively impacted.

Finally, agriculture has been impacted by increasing government involvement on the regulatory front, and decreasing involvement on the subsidy front. We see society and government taking a more proactive role in imposing behavioral constraints on farmers' activities. Today's decision makers are, in many cases, another generation removed from the farm and less understanding of rural America, of the farmer as a steward of the land, and of possible trade offs between regulation and costs. Society has become more sensitive to environmental and animal welfare issues. Consequently, much of the support for government financial assistance to farming has waned and the tendency to elevate environmental and other issues above production agriculture has been very apparent. Wetlands regulation, the Endangered Species Act, zero risk enforcement, pesticide application regulation, and farm conservation plans all impose costs on a production agriculture already under pressure from cyclically soft demand for most of its products.

The original Administration's tax bill would have imposed billions of dollars of new taxes on agriculture in the form of a BTU tax, a barge tax, and reduced farm payments. Fortunately, Congress limited the severity of the impact of policy changes on agriculture. Even though producers have a much stronger balance sheet today than a decade earlier, cash flows are not strong enough to absorb substantial new costs. The trade outlook, even with NAFTA and GATT, cannot improve over time if our products cannot be grown competitively in an increasingly global world economy.

Agribusiness Reaction

Agribusiness has been forced to make substantial adjustments in its structure and business practices in this low growth environment. In simple terms, in more normal times, business is able to grow profits via three strategies; market growth, price increases and cost reductions. Over the past four years, market

growth has been minimal and increased costs have been virtually impossible to pass along in the form of higher prices. This puts the burden primarily on cost reductions to increase profitability. In addition, burgeoning health care costs and mandated employee benefits have added substantially to employee related costs while higher taxes have cut into after tax profits. In order to maintain shareholder profits, business has focused on extensive internal analysis to find ways of getting costs out of the system. Benchmarking has become commonplace to try to identify the most successful practices in one plant and duplicate them elsewhere. New software systems are being put in place to simplify and streamline manufacturing, procurement and distribution processes. In addition, companies are exploring with customers and suppliers to find ways, like Efficient Consumer Response (ECR), to cooperate to avoid duplication of costs and processes. Companies are relooking at vertical integration as a way to find more synergies to produce products more efficiently. As a result, many businesses that were low cost producers five years ago have found that competitors have leap-frogged them and are now struggling to catch up again. So, what was an efficient food system five years ago is much more so today and will be even more so five years in the future.

The Importance of the Food System in the U.S. Economy

It is important to keep in perspective how U.S. agriculture developed and the role the food system plays in the U.S. economy. Productivity increases in production agriculture have been about double that of the U.S. economy as a whole. Independent producers, owning their own land, responding to market signals, adopting rapid increases in technology and having access to unequalled natural resources have fostered rapid productivity growth in U.S. agriculture. Food prices in real terms are declining. The USDA has historically contributed to the process by facilitating the technology transfer to farmers, providing analytical help to producers and business, and helping promote and defend agriculture and the food system to other interests. We frequently remind ourselves that the food system accounts for 15-20 percent of GNP and that U.S. consumers expend the lowest percent of income for food of any country in the world, while having access to the safest, most diverse, highest quality and most convenient food supply in the world. Within USDA and at the Outlook Conference, we can appreciate the importance of food and agriculture in the U.S. economy, but this perception is not shared throughout government nor is it necessarily shared by the public at large.

The agricultural community is somewhat frustrated by the fact that the players in agricultural policy are far less parochial than five or ten years ago. Trade issues, environmental issues, nutrition and health issues, which impact agriculture, extend beyond jurisdiction at USDA. The regulatory role of USDA may also make USDA personnel somewhat sensitive about being strong advocates for commercial agriculture on many issues. However, USDA, at the least, can help frame the debate by continually bringing to policy makers and consumers the importance of food and agriculture to the general economy and the relative quality and safety of our food system. The most regressive "tax" this country could experience are imposed regulatory costs on agriculture producers and processors that would substantially increase food prices, thereby negatively impacting consumers and our agricultural trade balance as well.

Agriculture is dependent on USDA to bring consumers and environmentalists together with producers and agribusiness. Much more information is needed, for example, about the real costs of meeting environmental and food safety goals and what the real benefits of these regulations are to society. Farmers and the food industry are concerned that many prospective regulations are being based more on emotion than facts, and that policy changes may bring economic harm to agriculture without substantial benefit. Agriculture has tried to be responsive to consumer concerns. HEALTHY CHOICE, and other introductions of low fat, low sodium foods were responses to consumer nutritional and nutritional labeling needs. Hazard Analysis Critical Control Points (HACCP) is a food industry response to microbiological concerns. Minimum tillage and best management practices are producer responses to soil erosion and agricultural chemical pollution concerns. But, we are still dependent on USDA to help verbalize, in a factual manner, agricultural strengths and vulnerabilities in responding to regulatory change.

Issues For the Future

Trade issues are certainly near the top of our list of concerns. Agriculture has been heartened by the passage of NAFTA and defeat of more protectionist interests. A successful conclusion to the GATT negotiations may be within the grasp of the world community of nations. Both of these agreements give the U.S. more access to other country's markets. With the domestic economy relatively mature and sluggish, we must look beyond our borders for growth opportunities. The exporting of raw commodities and value added foods needs to be encouraged. It is important that U.S. agriculture remain competitive in the production and processing of agriculture commodities. Thus, all federal

agencies, including USDA, need to review and be aware of the impact of their regulatory structure on maximizing trade in agricultural products. We are also concerned about the proclivity to use trade agreements to promote other goals of society. The level of complexity of these agreements and the likelihood of failure to agree is enhanced greatly when more issues are added to the process. In addition, China represents a huge growing market, and it is important that the U.S. maintain amicable trading relations there, as the rest of our competitors are showing no signs of backing away. The need for export subsidies will hopefully wane if a GATT agreement is reached, but programs financing exports, like GSM and MPP, need to keep pace with that of competitors. Market development must be a watchword if we are to be successful in a global marketplace.

The growing influence of the environmental lobby on agriculture and the U.S. ability to compete in a global market is a second important issue. There is a perceived effort on the part of USDA and other agencies to significantly cut the use of fertilizer and pesticides in agriculture. At the same time, data indicates there has been overall environmental improvement in agriculture. U.S. farmers are considerably less reliant on chemicals and fertilizers than farmers in other industrialized countries, and many developing countries. Chemical and fertilizer usage is not increasing in U.S. agriculture, and energy use is declining. Efforts to combat soil erosion have improved as minimum tillage and other cropping practices have reduced runoff. Our concern is that broad based regulations may be used to address very specific location problems, with questionable benefit and considerable costs. The Department needs to take the leading role in addressing the numerous environmental issues that affect production agriculture, as well as being able to deliver the technical assistance for producers, and agribusiness, to implement environmental changes that need to be made.

Food safety is a third issue that is impacting the food system. The food system is in critical need of a satisfactory solution to the Delaney clause, which specifies zero risk on residues in manufactured food. When Delaney was adopted, residues were detectable in parts per thousand, which is not necessarily applicable with today's technology of measuring parts per trillion. Society needs to adopt a negligible risk concept, based on scientific analysis. Credible legislation, such as Lehman-Bliley and Pryor-Lugar, is pending in Congress in 1994.

The character of the 1995 Farm Bill is the fourth issue for agriculture. 1995 may be a watershed year for agricultural policy. Policy can take a step

backward toward higher loan rates and greater acreage reduction and shrink our base and infrastructure and rural communities further. Or policy can build on the market oriented pieces of the 1985 and 1990 Farm Bills and provide the environment to attain a higher level of sustainable profitability in the last half of the 1990's. The Department can play a leading role in the environmental parts of the Farm Bill by providing factual analytical information and fostering a spirit of cooperation among conflicting interests. Numerous examples exist where farmers and urban interests have cooperated to resolve sticky environmental issues. The keys are education and mutual understanding and dialogue. We must and will protect our natural resources, but it is best accomplished in a cost efficient and farmer friendly manner.

Alternative uses of grain continues to be a major growth area. Demand growth for ethanol, polymers for degradable plastics, fructose, and a myriad of other uses has been very encouraging. USDA plays an important role in this process, but could perhaps be even more proactive in helping incent technological advances in new product development and help provide a stable policy environment relating to the use of these products.

Finally, agriculture needs USDA's help in promoting the positive aspects of our food system at home and abroad. We were encouraged by a recent statement by Secretary Espy regarding emphasis on U.S. agriculture in foreign markets stating "Grown in America has a nice ring to it. We've got to reemphasize - to talk loudly and clearly about our pride in U.S. agriculture." We would emphasize that our food system has to be marketed domestically as well. It is second to none and continues to improve, but yet agriculture has lost public advocates. If agriculture suffers undeserved public perception damage, a mammoth industry and the rural infrastructure becomes at risk. The severity of cyclical periods of export and domestic demand weakness impact on agriculture will be exaggerated if misperceptions of our food system continue.

Conclusion

Agriculture is currently suffering from lackluster demand on both foreign and domestic fronts. While demand will likely recover cyclically abroad as well as in the U.S., it is important that U.S. agriculture retain its ability to adopt technological advances rapidly and to have the flexibility to adjust to a changing environment. Agriculture is dependent on USDA leadership in agricultural policy to assist with accomplishing both objectives. A strong GATT agreement for agriculture would be a huge step. We applaud the Administration for its

efforts to date and encourage it to hang tough on obtaining a good agreement. Rural America, producers, and agribusiness would all benefit from that.

The food system has become more dependent on the role USDA can play in providing advocacy and providing leadership to bring diverse groups together to jointly resolve issues concerning our food supply. USDA has served agriculture and consumers well over time, but we are concerned that the focus may shift away from agriculture.

Karl N. StauberUSDA Speech
Washington, DC
November 30, 1993**"Agricultural Outlook '94"**

Willard Cochrane, John Kennedy's agricultural adviser, former head of the Economic Research Service, and author of one of the best histories of American agriculture, has often argued that agriculture policy is confused by talk about "the average farmer"—that American agriculture is too complex to represent in a single average. Rural America, similarly, is a complex place. What is accurate for the Delta of Mississippi and Arkansas may have little similarity with the Central Valley of California. The reality of the area around Burns, Oregon is very different than Ridgeland, Wisconsin where I just sold my farm or Statesville, North Carolina where I grew up.

I argue that each of us carries around one or two images of what "average rural America" is like, often based on our own limited experience. The diversity that is America is a great strength, but the diversity of rural America, combined with our own view that the rest of rural America is "like" the part we know, makes it very hard to talk about future directions or create appropriate rural policy.

While it is dangerous or confusing to talk about the average or typical rural community or area, we can say a number of things about rural America in aggregate.

- Rural America is being redefined. In 1890, when historian Frederick Jackson Turner declared the Frontier closed, civilization of the contiguous United States was complete.¹ Turner argued that the Frontier made Americans distinct from and, in fact, better than Europeans. Up to 1890, according to Turner, the United States had been defined by its rural edge.² While too much can be made of Turner's view, it had a significant place in the intellectual debate of the time.³ One hundred years later, in 1990, America is dominated and defined by the suburbs. 1990 was the first time in the country's history that over 50 percent of the population lived in metropolitan areas of greater than 1 million people. And the vast majority of the growth in urban areas that has occurred since 1950 has been in the suburban ring, not the inner city. 1990 was the first Presidential election where the majority of votes were cast in suburban districts.⁴ So in 100 years, the rural area went from being that which defined America to simply the less populated portion of the nation.
- Rural America's population has been declining, as a percent of the country's total population, since almost the founding of the Republic. In 1920, urban

- population exceeded rural population for the first time.⁵ By 1990 only 25 percent of the nation's population lived in the rural portion.⁶
- Agriculture no longer dominates rural America. In 1890, 24,771,000 Americans or 42.3 percent⁷ of the population lived on the farm, and there were 4,565,000 farms with 623 million acres in production, with the average farm being 137 acres in size.⁸ By 1990, 3,871,583⁹ Americans lived on farms, and they were 1.5 percent^A of the population. There were 2,140,000 farms using 987 million acres for an average size of 461 acres.¹⁰ Agriculture was no longer the major source of employment in rural America, it was no longer the major source of income for the majority of farmers, and by 1987, the average farmer had a annual cash income that was higher than the national norm for all households.¹¹
 - Using definitions developed by the Office of Management and Budget, rural America equals approximately 84 percent of the land mass of the "Lower 48" states.¹² Nationally, there are approximately 2,300 counties that are rural.¹³
 - Rural Americans are more likely to be poor than their urban relatives, and the gap is getting worse. Fifty-one percent of rural residents fall in the two poorest quintiles, while the comparable urban number is 37 percent. Between 1979 and 1987, per capita rural income dropped from 77 to 73 percent of urban per capita income.¹⁴ The same pattern exists for children. Thirty-six percent of all rural children live near or below the poverty level; the equivalent urban number is 29 percent.¹⁵

In the next few minutes I'm going to propose five different views of rural America and then talk briefly about the outlook for each. These five views are useful frameworks for examining the various opportunities and needs of rural communities; they are not the best or only ways of categorizing various parts of the nation. Some parts of the country may fall in more than one category, and there are certainly other ways to look at rural communities.

The five views of rural America I'm going to use for my brief analysis and projections include: (1) natural resource and ag-focused areas, (2) manufacturing-focused areas, (3) poverty-focused areas, (4) lowest density areas, and (5) regions experiencing traumatic change.

Natural Resource- and Ag-Focused Areas include the approximately 500 agriculturally dependent counties that are located mainly in the Great Plains, with smaller concentrations in the lower Mississippi Delta and parts of the Intermountain West; the 105 mining-dependent counties that are concentrated primarily in the middle Appalachian region with the rest spread throughout the country with clusters in the West. There are also a number of timber-dependent counties and recreation-dependent areas.

^A Calculated by author based on U.S. Census, p. xii.

The outlook for these parts of the United States is mixed. Natural resource-dependent communities that are near urban areas have substantial opportunities to increase tourism and specialized value-added food and wood processing. At the same time, these areas are likely to experience the greatest conflict over differing environmental values. Suburban people, who are now the majority in the U.S., are likely to be highly suspicious of promises by farmers, forest products companies, and others that have traditionally controlled much of rural development in these areas.

Even as there are calls for more environmental regulation, these rural areas will continue to be exposed to many issues that are well beyond the farmstead and the woodlot. Tax policy, trade policy, and monetary policy will have much to say about the economic viability of natural resource-dependent areas in the next year and the next decade.

Manufacturing-Focused Areas cover the largest part of rural America—945 counties or approximately 40 percent.¹⁶ These counties are largely located in the eastern two-thirds of the country with a small concentration in the Northwest. This part of rural America includes a mixture of businesses that are based on cheap labor and those based on some other competitive advantage. Rural communities that depend on cheap labor costs are not likely to fair well in the increasingly competitive global market. Rural manufacturing areas must compete based on quality and other competitive advantages, not tax give-aways and poor quality jobs. Like the natural resource-dependent areas, tax policy, trade policy, and monetary policy will have much to say about the economic viability of rural manufacturing areas.

There are about 500 counties that fall into the **persistent poverty** classification. These counties are most intensively clustered in the Deep South, the southern two-thirds of Appalachia, parts of the Ozarks, and in the West in areas with significant numbers of Native Americans or Hispanics. In many of these areas, farming is not currently a major source of personal income.¹⁷ These areas are less affected by shifts in the international marketplace. Past economic development efforts in these areas have been largely unsuccessful. If these areas are to experience increased economic opportunity, it will require increased, highly strategic efforts involving all levels of government. Without such increased investments, these areas are likely to continue be pulled down by persistent poverty and the lack of opportunity.

The **Lowest Density Areas** exist almost entirely between the 100th Meridian and the eastern slope of the Pacific Coastal Mountain Range. This is the area that the Poppers' of Rutgers University have suggested as the "Buffalo Commons." The heart of this low-density region are the 396 counties of the Great Plains. In this area, people have been moving from the rural counties to the urban areas for almost every decade since 1930.¹⁸ It is clear that this region has the potential of sliding into long-term economic difficulty. This region is highly dependent on agriculture and energy.¹⁹ Simply relying on the marketplace is not likely to help this

region of the country during the next year or five years. New government initiatives will be required to ensure the economic viability of much of this part of rural America. The further an isolated county is from an urban concentration, the more fragile its economic future.

Finally, some portion of rural America will experience **traumatic change** during the next year; just as happened in the Upper Midwest with the floods of 1993 and in portions of the Northwest related to timber issues. It is difficult to estimate the size and location of these areas, but we are likely to have them in 1994. Possible candidates include tourist-dependent areas if energy prices increase sharply; the irrigated portions of the Central Valley of California if the fire problems and water shortages continue in more urban areas of that state; and the Upper Midwest again, given the high levels of soil moisture present at the end of the 1993 growing season. I'm sure each of us has our own candidates for 1994. Regardless, when these dramatic shifts occur, there will be pressure on USDA to respond.

In conclusion, let me say that the outlook for rural America and USDA is mixed. The diversity of rural America represents a major challenge to the federal government and USDA particularly. The natural resource-dependent parts of rural America will experience continuing pressure over environmental concerns. In general, however, these regions are well positioned to compete in an increasingly competitive world, especially if there is a "level playing field." The parts of rural America with the most scenic natural resources and special recreational and retirement amenities are likely to experience substantial growth and conflict. Manufacturing-dependent areas include highly competitive individual firms and some that are not likely to prosper. Government investment, tax, and capital policies can do much to help these parts of rural America. Two parts of the country need special attention and assistance from the federal government and USDA: the persistent poverty regions and the lowest density regions. The approaches to these special regions needs to be cooperative and tailored to meet local needs and market opportunities. Finally, some part of rural America will experience human-made or natural dramatic structural shifts. The Department needs to be ready to assist these areas.

All of this is in a national political environment that will be increasingly dominated by the suburban voter and their representatives. The Department and rural leaders will need to create new alliances to succeed in these more complex times.

1. Nash, Roderick, *Wilderness and the American Mind*. New Haven: Yale University, 1967, pp. 145-146.
2. Nash, p. 146.
3. Petulla, Joseph M., *American Environmental History, Second Edition*. Columbus, Ohio: Merrill Publishing Company, 1988, p. 127.
4. *U.S. News & World Reports*, January 6, 1992, p. 43.
5. United States General Accounting Office, *Rural Development: Profile of Rural Areas*, Washington, D.C., April, 1993, p. 8.
6. U.S. General Accounting Office, p. 1.
7. Albrecht, Don E. and Steve H. Murdock, *The Sociology of American Agriculture*. Ames: Iowa State University Press, 1990, p. 44.
8. Albrecht and Murdock, p. 43.
9. U.S Bureau of the Census, *Statistical Abstract of the United States*; 1991. Washington, DC, 1991, p. xii.
10. U.S. Census, p. 644.
11. Hallberg, M.C., *Policy for American Agriculture - Choices and Consequences*. Ames: Iowa State University Press, 1992, p. 78.
12. U.S. General Accounting Office, p. 26.
13. U.S. General Accounting Office, p. 14.
14. Barancik, Scott, *The Rural Disadvantage: Growing Income Disparities Between Rural and Urban Areas*, Center for Budget and Policy Priorities, Washington, D.C., April 1990, p. ix.
15. *Farmline*, Economic Research Service, U.S. Department of Agriculture, September, 1991, p. 16.
16. U.S. General Accounting Office, p. 15.
17. U.S. General Accounting Office, pp. 18-19.
18. Sommer, Judith E., Fred K. Hines, and Mindy Petrulis, "Agriculture Still Key to Economic Health of the Great Plains," *Rural Development Perspectives*, U.S. Department of Agriculture, vol. 8, no. 2, n.d., p. 28.
19. Sommer, Hines and Petrulis, p. 28.

November 30, 1993

ECOSYSTEM-BASED MANAGEMENT AT THE PUBLIC-PRIVATE LAND INTERFACEpresented by Joan M. Comanor, Director
Land Management Planning and Ecosystem Management
USDA Forest Service

Good afternoon. I am delighted to share with you our current thinking about natural resource management and conservation and likely directions during the decade of the 1990's.

There is purportedly an old Chinese proverb or hex that is, "May you live in interesting times." Someone has obviously placed that hex on all of us! A couple of years ago I heard a speaker who offered the theory that the last decade of every century during the last several hundred years has been a volatile time - a time of transition, an explosion of ideas and creativity, and a time focused on getting one's house in order to enter the next century.

I can find ample evidence to support the premise that we are under the hex of living in interesting times and that for the Department of Agriculture and agencies such as the Forest Service, this is a decade of transition. We are in transition in how we approach our responsibilities for natural resource management and conservation. One aspect of that transition is a paradigm shift or evolution in our management. We refer to the new approach as ecosystem management and it applies to both USDA agencies responsible for natural resource management and conservation - the Forest Service and Soil Conservation Service.

The Forest Service adopted an ecosystem management philosophy in June 1992. We have been engaged for several years in much dialogue, both internally and externally, about this evolution that has centered around several questions. What do we really mean when we refer to ecosystem management? What is different? And for some, the question has been, "What is wrong about what we have been doing?" Because this is an evolution NOT revolution, we do not have complete answers to these questions.

For some in our agency as well as for our publics, especially those who have direct relationships to National Forests and Grasslands and are neighbors, this uncertainty or ambiguity is troubling. Concerns have been expressed about the effect of ecosystem management not only on the public lands but also on individual landowners and their rights. Change - even when it is positive - can be discomfoting and create uncertainty. This discomfort exemplifies the hex I mentioned in my opening comment about living in interesting times, times of transition, of new ideas and shifts in public policy. I want to acknowledge these concerns (they may be yours as well) while I try to describe where we are headed with ecosystem management. The evolution to ecosystem management will be a shift over time, not over night, in our management practices.

Ecosystem-based Management

Ecosystem management provides a framework for promoting management decisions that are:

- o ecologically responsible,
- o economically viable, and
- o socially acceptable.

These attributes are not new ones for our management. What is new is that we are placing priority on integrating these attributes on multiple scales in framing management choices.

By ecologically responsible we mean management of our natural resources in ways that are sustainable over time and that maintain the structure, function and processes of our natural environment. We are not abandoning our past, but building upon over 100 years of experience in managing forest resources. We are blending with that practical experience and forestry expertise the more recent scientific information and principles developed under the ecological sciences. Our past management has focused primarily on extracting goods and services from the National Forests and Grasslands. Obviously our society will continue to need and expect to have goods and services from the land. What we will put increased emphasis on is maintaining or improving the condition of the land as the context for providing sustainable levels of goods and services. The volume and timing of goods and services must be considered within the capability and suitability of the land. We will be directing more attention to understanding that capability and suitability.

Another aspect of being ecologically responsible is bringing to bear scientifically-credible information more effectively on management activities. We continue to learn more about the individual components of the environment. That has been a strength of our past management. However, in addition we need to understand better the interrelationships among the components of the environment. That is something we have not focused on sufficiently up to now. Better knowledge about the interrelationships among human and natural components of the environment will allow us to manage the land more efficiently and effectively and redeem our stewardship responsibilities. Because there is still much to discover, we will be increasing emphasis on adapting management over time based upon knowledge learned through monitoring the effects of activities.

Perhaps the most significant aspect of ecosystem management is the emphasis on multiscale analyses to aid decisionmaking and monitoring. By better understanding the capability of the land and monitoring effects of management at varying scales (both in space and over time), we will increase our effectiveness. This approach contrasts to our typical activities in which most of our attention is directed to site specific analysis. The implications or consequences of many activities are more readily apparent at a broader, landscape perspective and when followed through time.

Ecosystem-based Management

Ecosystem management offers a way to place ideas and management into context, both spatially and over time. Individual sites, such as farms, woodlots or ranches, or a tract on the National Forest, are part of watersheds, which form landscapes, which may be aggregated to higher and higher scales to encompass the planet (see Figure 1). It is the recognition of how each of these components nests within larger components that positions us to take an ecological approach to management.

An example that illustrates ecosystem management applications across ownerships is the "Butternut Coalition." In response to serious disease outbreaks affecting butternut trees in the south and northeast, a regional level partnership has been formed among federal and State agencies, universities and the National Association of State Foresters. Their efforts are focused on keeping the butternut tree on the landscape through applied research, sharing genetic material and devising special management practices for landowners. There are many challenges a land manager or landowner faces that he or she simply cannot solve individually or in some cases even recognize. But taking an ecological approach across the landscape allows better understanding of the situation while allowing individual landowners to be the most effective in achieving their individual objectives.

As in the example I just described, ecosystem management is an approach that can also be useful to individual landowners as well as federal or other public land managers. For either a federal land manager or an individual landowner, the sequence of ecosystem management steps would be similar (see Figure 2):

1. Identify and understand resource conditions and trends; the capability and suitability of the land and resources to provide goods and services in a sustainable way based upon the interrelationships among people and the other components of the environment.

Consider these elements not only on the specific tract of ground but also the conditions and trends of the surrounding landscape (i.e., what is happening at that scale which will influence condition and trend on the specific tract of land).

2. Determine desired conditions within the context of the land's capability and suitability (these include conditions of the land over time as well as the goods and services to be derived). For public land managers, these desired conditions would be developed with ongoing open public dialogue.
3. Identify the actions necessary to achieve and sustain the desired conditions.
4. Monitor the effects of management activities and adjust actions as appropriate.

Ecosystem-based Management

Among the many programs of the Forest Service, none is better suited for delivering ecosystem management assistance to private nonindustrial forest landowners than the Forest Stewardship Program and the Stewardship Incentive Program. They are intended to provide professional assistance to landowners on a voluntary basis to meet their own objectives in an environmentally sensitive and economically beneficial way. Authorized by the 1990 Farm Bill, the programs to date have provided more than \$21 million in assistance to 25,000 landowners. State Stewardship Committees are operating in every state and they can provide an outstanding forum for discussing ecosystem management applications to meet local needs and objectives. A couple of the state committees have formally adopted ecosystem management concepts. The reason these programs are well positioned for ecosystem management is that they are based upon voluntary partnerships, which is a cornerstone of our State and Private Forestry activities.

In conclusion, as we learn more and bring science into a stronger partnership with management, we can be more successful in living in harmony with our natural environment. By bringing the thinking together about environmental, social and economic objectives, we will begin implementing ecosystem management (see Figure 3). We can develop more prudent management activities and be more cost effective in achieving our conservation objectives for our forests and woodlands. Indeed, ecosystem management provides an effective framework for living in interesting times!

Figure 1

Ecosystem Management

**Each Ecosystem Is Part of a
Larger Ecosystem --
A Sense of Place
Can Be at any Scale**

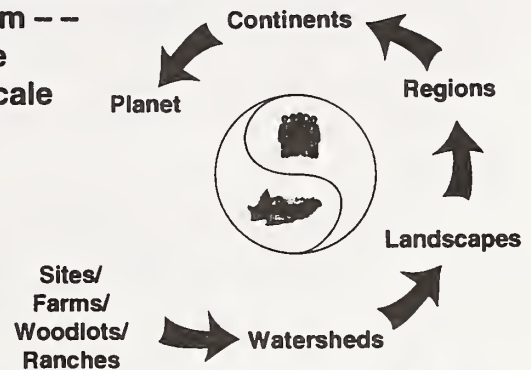


Figure 2

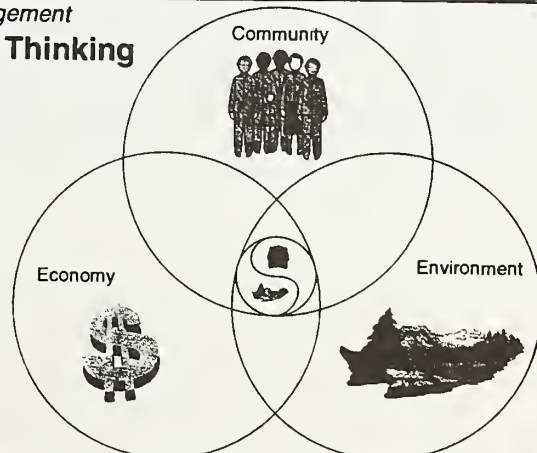
Desired Future Conditions: Land, People, & Resources

- What exists now -- inventory
 - How It got that way -- history
 - What is ecologically possible -- capability
 - What Is economically feasible -- analysis
 - What Is socially desirable -- end results
 - How to get from here to there -- actions
-

Figure 3

Ecosystem Management

**Bringing the Thinking
Together**



IMPLEMENTING ECOSYSTEM-BASED ASSISTANCE
FOR THE MANAGEMENT OF NATURAL RESOURCES
IN THE SOIL CONSERVATION SERVICE -
WHAT DOES IT MEAN FOR LAND USERS?

Diane E. Gelburd, Ph.D.
Associate Deputy Chief for Programs
Soil Conservation Service

With telecommunications weaving us into a network with the rest of the world, we are constantly reminded of how we are part of a much larger system - one on a global scale. So it is with natural resources. The air we breathe today may be inhaled by an Icelandic tomorrow, and was inhaled by an Ohioan yesterday. We realize that our vast resources in the United States are not limitless and they are interdependent. We in the Soil Conservation Service (SCS) have become acutely aware of how important it is to conserve natural resources as elements of an ecosystem. Our emphasis on highly erodible land and wetlands, required by the Food Security Act during these past 8 years, has made us very aware of the need for a more holistic approach for a healthier, sustainable environment. Many other agencies and organizations are concluding that a fragmented approach to environmental protection does not work well. We need to consider all the resources - soil, water, air, plants and animals, as well as ecosystem processes and social and economic viability.

As with the Forest Service and many other agencies, the Soil Conservation Service is preparing to deliver to its customers a new and better way of managing natural resources. This new service blends the latest ecosystem science principles with the sound conservation fundamentals of previous years. Termed "ecosystem-based assistance for the management of natural resources", this assistance focuses on managing the natural systems and processes that sustain resources.

An ecosystem is defined as a biological community and its interactions with its environment. Ecosystems can be delineated at many different levels, according to space and time. An agricultural field, with its plants, animals, and the soil, water, and air supporting the crop, can be an ecosystem. Ecosystems can occur at much larger scales, such as the Mississippi River watershed, with all its cities, tributary rivers, and myriad of land cover and water flows. Ecosystem management is the appropriate integration of ecological, economic, and social factors in order to maintain and enhance the quality of the environment to best meet our current and future needs. Ecosystem management means keeping natural communities of plants, animals, and their environments healthy and productive so people can benefit from them year to year. To a farmer, it may mean maintaining a healthy balance in his or her agricultural field by using crop rotations to reduce pests and disease and increasing soil fertility with a nitrogen-fixing crop. The farmer may decide to use a number of conservation practices to improve the water quality of the family drinking well, the downstream water supply, and fish population. He or she could plant a grassed waterway to prevent gullies, and practice better range or pasture management for increased and sustainable economic returns.

SCS ecosystem-based assistance to clients will continue to use and build upon the SCS planning process and Field Office Technical Guide, which addresses the interactions among resources. Ecosystem-based assistance provides an interdisciplinary approach to many resource goals, such as soil conservation and water quality improvement. This approach is more effective and will help avoid conflicts that occasionally occur when individual solutions are developed to address resource problems and legal requirements. Examples include the National Environmental Policy Act, the Clean Water Act, the Food Agriculture Conservation Trade Act, the Endangered Species Act, and the Watershed Protection and Flood Prevention Act.

SCS is providing this service for four reasons:

- o It recognizes people as part of the ecosystem. Often, we develop decision-making models of specific animal or plant ecosystems without people in the equation. People are frequently considered third-party observers. We cannot remove the people factor from our management decisions. We must consider the social, economic, and cultural components as equal subsystems of an ecosystem.

- o It is systems-oriented rather than single resource oriented. This allows land users and planners to address all resource concerns with less potential for conflicts. A systems approach can often mean looking at a broader area, and involving more participants. Therefore, more partners may work together to solve resource problems, reducing the burden on any one group. The Chesapeake Bay Program is an example. It was established 10 years ago to address the declining water quality of the Bay. The District of Columbia, Maryland, Pennsylvania, and Virginia joined forces with 12 federal agencies to develop plans for improvement within the bay watershed. At first air was not factored in as a controllable source of nitrogen. Recent research and sophisticated computer modeling now indicate otherwise. In fact, we now know that roughly 30 percent of the nitrogen comes to the bay from atmospheric deposition. And, 10 to 20 percent of that pollutant load is now considered controllable within the region. As a result, the states are developing a more comprehensive ecosystem approach that includes air in their management strategies.
- o It focuses on sustainable use. Our objective is to assist land users with managing their natural resources for the benefit of families, their communities, and future generations. This approach should help avoid resource crises. If we consider all our resources and how management of one affects the others, we can achieve a more balanced approach. When we have focused on one resource, it has sometimes led to unintended adverse effects on another. Then we often take a band-aid approach and never quite catch up. It may not be possible to sustain all resource uses at the same level, but we can weigh the pros and cons up front and make wise decisions as to which is best for the environment and society.
- o It contributes to the goals of public land ecosystem management by providing compatible assistance to those who wish to participate voluntarily on private, non-forested lands. Federal agencies, such as the U.S. Forest Service and Bureau of Land Management, are implementing ecosystem management. In some cases, they will need help from private landowners to meet their objectives. We will be assisting in voluntary partnerships to meet the objectives of both public and private land users.

What Does This Mean for Land Users? The best way I can answer this question is with an example. That example is the Greenville community in Plumas County, northern California. The community began a major effort to solve a host of resource problems when the Pacific Gas and Electric Company determined that it would have to spend \$64 million in dredging fees or close their Rock Creek Dam hydroelectric powerhouse which was up to its intakes in sediment. In addition, a lower water table and other land use changes were causing Wolf Creek and Red Clover Creek to undercut its banks and flood, threatening businesses, homes, and some surrounding farm land. The Feather River trout population had dropped drastically due to mining, sediment, dams, and trash deposits. Timber harvests had been reduced due to endangered species protection and other factors. The 26 percent unemployment rate was a major concern. In 1987, 13 agencies and organizations, including the U.S. Forest Service and SCS, signed an agreement to create a broad erosion control mission to stop the source causing some of the problems. They decided to use the Coordinated Resource Management (CRM) process.

CRM is a formal problem-solving, consensus-building process involving all concerned participants. No action is taken until everyone agrees to it. The community agreed that their natural resources were their economic capital. If they could not keep them healthy, as an ecosystem, their own economic returns would be reduced. With Leah Wills, Associate Director of the Plumas Corporation, as a coordinator, they have raised \$2.5 million and conducted 33 projects and studies. The community focuses on cumulative effects, rather than single polluter problems. The community decides what problems and objectives to address. They have worked on streambank erosion, water table enhancement, fish habitat restoration and economic development. Their natural resources conservation work has led to a Watershed Management Certification Program at Feather River College. Students from two local high schools gain training and experience by monitoring the resource improvements. Wolf Creek no longer threatens Greenville's homes and businesses, jobs are being created, and all lifestyles, cultural values, and economic needs are being addressed.

Moving from the community and watershed level, let's telescope to the individual land user. One rancher recently stabilized a streambank on his property by restoring riparian vegetation with assistance from SCS and federal cost-share money. This stabilization reduced the stream's sediment load by 1,000 tons a year. That means less sediment to clog the hydroelectric dam, and reduced cost of an estimated \$6,000 per 1,000 tons to dredge. It also means fertile pasture land saved. The trout and bird populations have increased. Bank swallows have taken up residence at no inconvenience to the landowner and may someday become so plentiful that they will no longer be a state endangered species. It also means better pasture use and fishing to the land user.

This is a model of how environmental issues will be increasingly addressed in 1994 and beyond. It is based on ecosystem principles, involves all concerned participants in the decision-making process, provides incentives, focuses on sustainability for current and future use, and insures a productive nation in harmony with a quality environment. The Greenville community is one model. They worked a long time to meet their challenges and resolve some of the issues. And they will continue to have challenges. An ecosystem-based approach is not easy. It requires a more comprehensive way of looking at the world, and people working together. It is a more effective approach for protecting our environment for the benefit of all.

AGRICULTURE'S ROLE IN ADDRESSING NONPOINT SOURCE POLLUTION

John P. Burt
Associate Deputy Chief for Programs
Soil Conservation Service

INTRODUCTION

Good Afternoon. It is indeed a pleasure to meet with you and discuss agriculture's role in addressing nonpoint source pollution.

The agricultural community today is very deeply concerned about nonpoint source pollution.

It is concerned about the quality of water that nourishes farms and ranches, crops and livestock, and farm families themselves.

It is concerned about farming practices up and down the watershed and Federal and State reports on the magnitude of agricultural pollution.

It is concerned about the proliferation of rules and regulations and is apprehensive about a new generation of regulations primarily from the Clean Water Act.

And, there are two reasons for these concerns.

1. The Coastal Zone Management Act is already law and the Coastal and Great Lakes States are struggling to develop their nonpoint source program.

2. The Congressional committees who will be developing the Clean Water Act for reauthorization are not agricultural committees.

Society does have a legitimate concern about the surface and ground water pollution from agricultural operations. The question is, what is the best approach to solving agricultural pollution? Some people have expressed the options as either regulatory or voluntary approaches. In reality, it will probably be a combination.

I believe agricultural producers will have a small window of opportunity to install pollution abatement practices on their farms and ranches across the country. I also believe that some regulatory process will probably be in place and will be triggered if the voluntary effort fails.

It behooves everyone in the agricultural community to work together to make the voluntary approach a success.

My reference to the agricultural community refers not only to the farmers and ranchers, but also to farm organizations, farm press, farm industry, and resource organizations as well as U.S. Department of Agriculture. Each of us must work in partnership to prove that the agricultural community can respond and improve water quality. Everyone must be involved.

NONPOINT SOURCE ABATEMENT OPTIONS

In the Clean Water Act, it appears that the States will be required to develop a priority list of impaired or threatened waters. The States will have two nonpoint source abatement options to apply in the priority waters.

Option 1 involves installing pollution abatement and prevention practices for all nonpoint sources in priority watersheds. It will require a crash effort to install the practices within the window of time for voluntary action.

Option 2 however, involves a more systematic, targeted approach -- referred to as the "watershed approach". The watershed approach means developing a plan of action for priority watersheds.

The watershed approach is the most promising opportunity for agriculture. It gives local farmers, ranchers, and rural communities the opportunity to participate in the planning process. Their participation will help them understand the water quality concern, sources of impairment, and corrective actions needed.

I would like to expand on the watershed approach and describe how I envision it being implemented.

WATERSHED BOUNDARY

Watershed boundaries encompass the land area that drains into a stream, lake or estuary. Within this boundary, multiple land uses, soils, geology and other resource variables will probably exist. Point sources and nonpoint sources of pollution will probably be present.

Watersheds occur on the landscape in a nested arrangement. For example, watersheds occur in all different sizes, and large watersheds contain smaller ones. The large watershed boundaries have been delineated by U.S. Geological Survey and small watershed boundaries by the Soil Conservation Service.

All the priority watersheds will not have a plan of action developed at once. For example, States will use a planned sequential process to develop plans for first priorities before proceeding to the remaining priorities. The State will have significant control over the planning schedule.

The State water quality agency may select a large watershed as a priority area of concern. After scoping the sources of pollution and the water quality conditions, smaller watersheds may be selected for a concentrated effort to develop a plan of action. From our experience, the smaller the watershed the easier it is to get local people involved in the planning process.

The Chesapeake Bay experience has proven the difficulty in relating water quality of the Bay to a small farm in upstate Pennsylvania. The local people have difficulty relating their

actions on the farm to the impact on the Bay, so the staff is now concentrating on the smaller watersheds. This helps get the local people involved with improving their stream's quality, and it helps deliver improved water quality to the Bay.

OUTREACH AND SOLUTIONS

After the smaller watersheds are selected, there should be an aggressive outreach program to contact everyone in the watershed to seek their involvement. We must get everyone involved. USDA cannot do the job alone.

The local people will want to know what the water quality problem is; the location of pollution sources; and what the potential solutions are. Naturally, they will want to reach a conclusion on solutions immediately. However, they first need to fully understand the water quality problem and the cause-effects relationships. Most water quality problems cannot be solved by reducing just one pollution source. It will require understanding the entire watershed ecosystem. It will require understanding the interactions between human activity and the resources.

After the local people understand the cause-effect processes, they will begin to become more convinced on how to solve the water quality concern. Then, they will adopt actions in their day-to-day farming decisions that will improve water quality.

Perhaps an example will help illustrate this critical process. In one of the USDA water quality projects, the stream was still fairly healthy but deteriorating due to sediment loads. And, because of the lack of public awareness, we were not solving the problem very quickly. Someone got the idea of getting the farmers more aware of the problem. They arranged canoe trips. The farmers got to see the soft mud bottoms in the stream's pools and observed how some pools were filling. They witnessed the reduction in aquatic life in sediment deposition areas. It became more obvious to the local people that sediment reduction was necessary. As a result of the canoe trips, USDA staff has witnessed major progress in implementing sediment reduction

practices. In addition, the farmers are now developing their own ideas for reducing sediment and some are reestablishing trees in stream corridors.

SITE SPECIFIC PLANS

There is not a blanket approach. It is not good science. And it is not good business. Solutions have to be tailored to the individual farm and ranch operation. Site specific farm and ranch plans will be needed to help fit all the pieces together. These plans cannot be "cookie cutter" plans due to the complexity of the interactions between the inputs, resources, crops grown and farm/ranch management.

MONITORING

As we target our limited resources on water quality, we need to know if we are successful in reaching the water quality goals. So, the need for water quality monitoring is obvious. This is the proof of success.

However, I caution that complete reliance on water quality monitoring may give misleading conclusions because it takes time for some surface and ground water systems to respond. But, if we account for the practices installed on the land and compare installation progress with water quality monitoring, we can get a better idea of ecosystem response. In addition, the local people will have data to demonstrate to the water quality agency that installation progress is occurring.

As an example, we had a water quality project whose goal was to reduce phosphorus. The pollution abatement measures were installed but the water quality improvement was not very significant. We were puzzled. Further soil testing with deeper samples revealed the true problem. The soils had been receiving high phosphorus applications from animal manure for decades and the soils were saturated. It will take twenty to thirty years to fully use the excess phosphorus and reach the desired water quality goals.

Therefore, we need to document implementation in conjunction with water quality monitoring. This will help project managers and the local people understand ecosystem response and the need for possible adjustments in abatement, or understand the reasons for the lag in water quality improvement.

SUMMARY

How can we, in this audience, make the watershed approach a success? Everyone here must get involved in the process.

Agricultural organizations must encourage their members to become involved and give them information to use for improving their operations.

The press needs to keep readers advised of the opportunity for the farmers and ranchers to get involved and help control their destiny.

The farm industry will need to produce special equipment and chemical management techniques to help improve water quality.

And, USDA must build stronger partnerships with each of you, the State and Federal agencies and others to work as a team.

Outlook '94

For Release: Tuesday, November 30, 1993

FOOD SAFETY INITIATIVES FOR 1994 AND BEYOND**Patricia Jensen
Deputy Assistant Secretary for
Marketing and Inspection Services**

It's a pleasure to be here today -- in the Jefferson Auditorium, but I must say it's exciting and somewhat eery in a science-fiction way to know I'm also speaking right now to people gathered in hundreds of sites throughout the country. Through space age technology, Galaxy 3 C-Band is simulcasting our session -- in "real time," as they say in "virtual reality" terms. The satellite links us with schools of agriculture, state officials, food industry representatives, nutrition and other health professionals, and consumers.

Galaxy 3 links us technologically. But the link between us is a fundamental one -- a link forged long ago when the first person produced more than was needed for subsistence and sold wheat, animals, or milk or eggs to another person. This link was forged by Nature, not by humans -- we all eat food, so, we all are consumers.

Working to enhance the safety of food -- our mission at the U.S. Department of Agriculture -- is not an abstract quest but rather is basic to survival. The deaths and illnesses from the foodborne pathogen E. coli 0157:H7 tragically portrayed this reality at the very time Mike Espy was sworn in as Secretary of Agriculture. He reacted to the tragedy by moving swiftly to strengthen the safety links in the food chain.

Today, we are making progress as we seek ways to better protect consumers from foodborne pathogens and, at the same time, to see if we can learn ways to keep pathogens out of the food supply.

Eliminating pathogens from raw foods is not now possible. Bacteria -- including disease-causing ones -- are part of the natural world.

Yet, we can and must do more. In the next few minutes, I want to report on USDA's 10 months of progress since Bill Clinton became President, and point to where we are going in 1994 and beyond.

I will explain how we are strengthening links between regulatory agencies at all levels of government, how we are challenging the food industry -- from the farm to the table and the drive-thru -- and how we are reinforcing the links between the food producer, the health professional, and the consumer.

Meat and poultry inspection as you and I -- and our parents and grandparents -- have known it since 1906, has protected the consumer from threats posed by diseased animals, physical contaminants and residues. Now inspection must change. New incidents in recent months have tragically underscored the virulence of E. coli O157:H7. Stories abound about other pathogens. It is painfully clear that, today, microbiological hazards pose the greatest threat to public health from consumption of meat and poultry. It is also clear that meat and poultry inspection must change if it is to deal with microbial contaminants.

Today, in highlighting progress against pathogens, I will describe steps to teach safe handling of meat and poultry, steps we have ordered to clean up meat and poultry, unannounced reviews of plants, studies to better understand pathogens on meat and on live animals. In addition, I will also talk about HACCP, and progress as we work together to design the ideal regulatory program of the future.

You will see that from now on, consumers and industry should have little doubt that food safety will be a theme linking public health agencies. You will see that from the farm to the table, from the pitchfork to the table fork, we are going to work together to develop a new inspection system.

And, you will see that our new approach to food inspection sends a strong message. It says that food inspection must protect public health and that there can -- and will -- be no compromises.

SAFE HANDLING INSTRUCTIONS

Let us begin with a step to instruct consumers how to handle raw meat and poultry. Because the best defense against foodborne illness is to handle foods properly, Secretary Espy has directed USDA to mandate safe handling instructions on every package of fresh meat.

Under the rule we developed, meat and poultry packaged under USDA inspection as well as those packaged in supermarkets and other retail outlets will have to carry labels stating that "Some animal products may contain bacteria that could cause illness if the product is mishandled or cooked improperly."

The labels will also have to carry instructions saying the meat must be kept refrigerated or frozen and thawed safely. And, the labels will instruct food handlers to avoid cross contamination by keeping raw meat separate from other foods and by washing working surfaces, utensils, and hands after touching raw meat. The last two directions say, "cook thoroughly and refrigerate leftovers within 2 hours."

CONSUMER EDUCATION

The label is one more way to educate food handlers. USDA, the Food and Drug Administration (FDA), and the Centers for Disease Control and Prevention (CDC) have been working together with state and local officials to increase awareness of proper sanitation and food handling practices among food preparers. Recent intensified efforts include:

- Video news releases on the new safe handling label.
- USDA worked with meat and supermarket associations on point-of-purchase materials to explain the new label and on materials to give consumers on safe handling of hamburger meat.
- On September 2, FSIS and FDA held a teleconference for state health officials to discuss the lessons learned from the E. coli outbreaks and the steps to take to prevent foodborne illnesses.
- More than 138,000 callers last year learned about food safety on USDA's toll-free Meat and Poultry Hotline. Through one-on-one conversations, hotline staff answered consumers' questions and many others learned from recorded messages when the staff was not on the line.
- USDA recently issued three video news releases promoting food safety for the holidays. The videos are distributed via satellite across the country.
- USDA agencies are working together to distribute food safety information to the Food and Nutrition Service's Child Care Food Program that reaches nearly one-quarter of the Nation's children in day care and Head Start.
- Targeting efforts to educate young mothers and food handlers in restaurants and in hospitals, nursing homes, day care centers, and homeless shelters. Education is critical for those serving the most vulnerable -- the sick, the elderly, the homeless, and the young.

PATHOGEN REDUCTION EFFORTS

We know that pathogens -- not people -- are the culprits, and our many undertakings against bacterial pathogens reflect that fact.

Since last January, USDA has worked to design and put in place a far-reaching pathogen reduction program that addresses many steps in the production, distribution, and preparation of meat and poultry products. I would venture to say that our progress in the last 10 months has been more significant than what has occurred over the past 10 years.

- One of our first steps was to launch nationwide, microbial baseline studies. The studies will give us comprehensive "pictures" of microbial levels.

The first survey, which began in October 1992, will tell us about pathogens in steer and heifer slaughter plants throughout the country. One year's survey results will be announced by the end of this year.

- In September, we began a similar survey on bulls and cows, the chief source of ground meat.

- A micro baseline survey for poultry is scheduled to begin next year, and one on swine will follow.

- This Fall we began targeted microbiological studies of disabled animals and ground beef.

These studies will give us yardsticks against which to measure future efforts to reduce harmful bacteria.

Other steps or actions aimed at pathogen reduction include:

- * implementation of micro testing into pre-op sanitation inspection.

- * a pilot for micro testing at critical control points in beef slaughter and processing plants.

- * an important development, granting of direct research authority to FSIS.

- * and, an announcement spelling out the criteria for rapid microbiological tests that will be of use to the Food Safety and Inspection Service. Rapid tests to detect and count bacterial pathogens are basic to learning more about pathogens -- and enforcing rules on bacterial contamination.

-- We have outlined our needs in the Federal Register to make it easier for test developers to design accurate tests that will work in the real world of the meat plant and the kitchen.

ON-FARM SAFETY EFFORTS FOR MEAT AND POULTRY

Several USDA and PHS agencies are working together to find ways of reducing the bacterial load on animals -- before they leave the farm, or feedlot, or grow-out house. For example:

- USDA's Animal and Plant Health Inspection Service (APHIS) is doing a risk analysis study to determine the source and incidence of E. coli 0157:H7 in beef cattle. We want to determine whether the pathogen is more prevalent in dairy cows than in beef cattle.

- The involvement of APHIS in E. coli studies comes after several years' successful work tracing back the source of Salmonella enteritidis in eggs.

- USDA is also designing model on-farm programs for preventing pathogen contamination.

Our goal is to determine where and how pathogens enter the food chain -- knowledge needed before we can design intervention strategies.

ENHANCED ENFORCEMENT

Secretary Espy and I and the officials of Agencies we oversee are not only talking tough, but we are strengthening inspection oversight and enforcement.

- We have strengthened oversight with more frequent and more intense, unannounced and specially targeted reviews by a newly established Review and Assessment Office.

-- Reviews have been undertaken in beef plants and in poultry plants as well. In March, Mike Espy directed FSIS to conduct unannounced reviews at 90 beef slaughter plants.

-- In mid-November, Secretary Espy announced special reviews of 26 slaughter plants that process 64 percent of the nation's turkey production.

Although the final report is not yet completed, we can say the inspection system was working very well in most plants, but in others immediate corrective action was needed -- and was taken. Follow up investigations and reviews will ensure problems are corrected.

- We have reinforced our requirements that all fecal, ingesta, and milk contamination be trimmed from beef carcasses.

- We have begun a study to determine whether washing or trimming is more effective in removing contamination.

- We have hired 200 new inspectors, and have taken steps to increase coverage by Veterinary Inspectors in plants handling high-risk animals.

- We are writing new rules to strengthen requirements that meat and poultry plants maintain records that will help us when problems occur so that we can better trace back the sources of animals.

- We also need new laws giving the secretary greater authority to define and remove from commerce contaminated products.

- This year, we enforced new cooking and handling controls for plants making cooked, partially-cooked or char-marked ground meat products. This requires labeling of packages of meat patties that are not fully cooked, alerting the handler to "Cook until well done, for safety." The rules also call for meat plants to cool heated products quickly and to take steps to prevent raw meat from cross-contaminating product ready for packaging.

USDA COOPERATION WITH OTHER PUBLIC HEALTH AGENCIES

The Secretary and other USDA officials know that we must take steps to strengthen USDA's public health mission and provide the means to incorporate human health considerations into our policies and decision making.

- We are setting up a Public Health Division within FSIS and are working closely with the Office of the Surgeon General and others in the Public Health Service to select a physician to head the division.

- In addition to an APHIS scientist, we are about to name an FSIS scientist to serve at the Public Health Service's Center for Disease Control and Prevention in Atlanta.

Candidates have been interviewed and a decision is expected shortly. We saw the need for such positions during the E.coli crisis and believe they will enable our Agency to have an even closer relationship with CDC, better equipping us to stay on top of public health issues and trends relating to meat and poultry.

PUBLIC INPUT IN DESIGNING TOMORROW'S INSPECTION SYSTEM

We have been moving on the fast-track, but we know we must not make changes for the sake of change. We are committed to designing a regulatory program for the future, and we are committed to designing it based on the best thinking of all concerned -- experts, consumers, and, especially, our own employees.

- We distributed both the FSIS Strategic Plan and the Pathogen Reduction Plan widely, and we held six public hearings in May and June in different cities across the country. In all, 282 individuals presented almost 1,700 comments. Among the subject areas most discussed were inspection, communication/cooperation, consumer education, and science/research/ and technology.

The summary of public comments helped conferees who met on regulatory reform November 9 and 10 nearby in Virginia. The conference was extremely helpful, providing input from all segments of the population -- consumers, scientists, industry and many others.

- Also, I have no doubt that the Hazard Analysis and Critical Control Point (HACCP) system will be important in the future.

In May, the secretary announced that meat and poultry plants will be required to have HACCP systems. Again, to ensure public participation in designing a regulatory proposal, we are planning roundtable discussions early next year.

CLOSING

In closing, I want to thank you for your kind attention. From this overview of our progress in the last 10 months, I hope you will agree that our aggressive approach to enforcement of existing rules and the designing of new approaches are, indeed, enhancing the safety of America's plentiful, nutritious food supply.

Under the direction of Secretary Mike Espy, and with full support of the President and the Vice President, we are fortifying the food safety network. And, we -- the consumers -- will all enjoy the benefits.

Outlook '94

For Release: Tuesday, November 30, 1993

FOOD INDUSTRY PERSPECTIVES ON FOOD SAFETY AND NUTRITION

Dr. Stephen A. Ziller
Vice President, Scientific and Technical Affairs
Grocery Manufacturers of America

I thank the organizers of this 70th USDA Agriculture Outlook Conference for the opportunity to contribute some food industry perspectives on "Food Safety and Nutrition Issues for 1994 and Beyond. "

My father was born on a farm in Minnesota and during my early teen years I spent parts of several summers in "farm training" as the resident "hired hand" from Kansas City. It was hard work for a city boy but an invaluable education about what it takes to efficiently produce food animals, dairy products, grain, and oilseeds. After completing my Ph.D. in Biochemistry, I have worked for about 25 years on food safety and nutrition issues in the U.S. food industry. In light of that experience, I would like to share with you my overall perspective on these issues and then provide you with some specifics in both areas.

The United States is blessed with a most abundant, safe, and nutritious food supply. The tremendous quantities and qualities of grains, vegetables, fruits, dairy products, meats, fish and other food products are a tribute to our agricultural productivity. While I will spend some time today discussing current and future challenges and opportunities, these will serve to further support the conclusion that the food supply is safe, nutritious and improving.

When we think about food safety and nutrition, we need to take the full view from the farm to the fork. This involves looking at a minimum of seven separate stages for food:

1. Production in Agriculture
2. Storage & Transportation
3. Food Processing
4. Distribution and Sale
5. Final Food Preparation (at home or away)
6. Consumption
7. Optional Storage

When we consider these steps in a historical perspective, change is the constant characteristic. Droughts or excess rain can impact mold growth, outbreaks of insects in stored grains must be avoided, safety of new food processes must be assured, changes in distribution must provide for maintenance of nutritional quality and safety, foods must be cooked adequately for safety but not excessively leading to unwarranted loss of nutrients, consumption should be adjusted to individual nutritional needs, and cooked foods should be stored properly according to their type.

It is also important to note that different people have prime responsibility for different steps in this overall food system. Everyone involved from the farmer, the food processor, and the final consumer needs to be educated to receive optimum health and nutrition benefit from our U.S. food supply.

The food industry has recognized both the inevitability and positive importance of change in the food supply system to better serve the consumer. The industry is by no means perfect nor can such a system ever expect to operate at "zero risk." However, the record of safety and nutrition built on good science will continue to be outstanding based, in part, on the directions of the food industry in adopting management systems of total quality that provide for continual improvement.

The science base for future change will not only be from within the food industry, but will include their interactions with a host of academic, professional, and government scientists working on food safety and nutrition.

In the area of food safety, the food industry has a multitude of efforts underway to do existing things better and to prepare for future change. I will comment briefly here on a few of them with which I am familiar.

1) First, HACCP Guidelines. Mandatory Hazard Analysis Critical Control Point programs are being considered by USDA and FDA initially for certain classes of foods such as seafood and meat & poultry products. HACCP provides proactive food safety assurance which helps prevent serious health consequences through control of identified critical control points. This approach has been affirmed by scientific bodies both in the U.S. and internationally. The food industry was part of the original development of HACCP for food processing and continues to work with government officials to forge the right next steps in defining the specifics of implementation. I expect that this will be an important activity in 1994, beginning early in the year with the USDA roundtable discussions. FDA is also likely to be soliciting additional input on future direction of HACCP for foods which they regulate. Examples of issues which remain open to discussion within the industry are: what the scope of HACCP should be, what the criteria should be for identifying a regulated Critical Control Point, what records should be subject to regulatory access, how can company proprietary information be protected, and the need for the manufacturer to have primary responsibility for developing the HACCP plan (with plant specific assessments and controls).

2) The second food safety area is "Microbiology, New Processes and New Detection Methods." The history of the last few years has reinforced the need to keep the utmost vigilance with respect to potential pathogenic organisms, both from more virulent strains as well as from new raw materials and processes. The food industry spends significant resources making sure that their products are safe when consumed. They utilize many of the newest analytical techniques

which are most sensitive and rapid to help validate their quality control and Current Good Manufacturing Practices. Substantial processing changes and new food processes are thoroughly evaluated to ensure microbiological safety. Research by government, academic and industrial scientists will continue to make remarkable progress in this area in the next few years.

3) The third food safety area is "The Methods to Determine Food Safety, The Redbook and Beyond." One of the most helpful guidelines to determine food safety was the publication by FDA of the "Redbook" which described what test methodologies would be expected to answer certain food safety questions relative to petitions before FDA. While it was not a cookbook, deviation from the Redbook carried a significant regulatory risk of disapproval. Earlier this year, FDA proposed an updating which made some additions in the areas of neurobiology and immunology as well as some other changes on previous methodologies and expectations. The food industry is co-sponsoring an International Life Sciences Institute (ILSI) conference in a few days which will bring the best scientists in each specialized area together to discuss the details of the proposed changes and additions. Some of the industry concerns are whether the new tests have sufficient validation to use them for regulatory purposes now, whether the guidelines are too rigid from a regulatory point of view and are not flexible to the individual situation as intended, and whether the proposed analytical requirements are feasible. The industry looks forward to addressing these and other concerns to help FDA develop appropriate guidelines in the future for food safety decisions.

4) The fourth food safety area is "Safe Levels of Agricultural Chemicals." So much has been said in recent years on this topic that I will not repeat it here. Suffice it to say that the food industry currently needs agricultural chemicals and produces a food supply that is very safe. Recently the National Research Council completed a report on pesticides and both the regulatory bodies and Congress are considering further actions. The food industry has been involved on both fronts with constructive efforts. Basically, when foods with trace pesticide residues are determined to be safe by scientifically based risk assessment determinations, use of that pesticide should not be banned based on any other legal technicality. In a petition to EPA the food industry has asked EPA to use their legal discretion in such decisions. In a separate effort, the food industry is supporting food safety legislation introduced by Representatives Lehman, Bliley and Rowland. This bill will give EPA more authority to restrict or ban the use of unreasonably risky pesticides but allows their use when present at negligible risk levels as opposed to the present zero risk standard.

5) The fifth food safety area is "Control of Mycotoxins in Foods to Safe Levels." Over the years, several mycotoxins were identified in foods and their effective control to safe levels both in human foods and animal feeds has been an active area of research in universities, government, and industrial labs. More recently with the advent of new analytical probes, many more potentially toxic metabolites of molds and fungi are being investigated. The food industry is participating actively in this new research and will likely contribute studies on processing degradation and on other processes which can remove or deactivate such constituents. Heavy rains and floods as well as periods of extended drought can aggravate mold invasion in growing crops and mold growth in storage. The industry and government groups will continue to monitor the situation carefully and take indicated action.

6) The sixth food safety area is "Food Allergies." While food allergies are not new, the food industry has taken a proactive position on helping consumers avoid foods which could pose a sensitivity to some individuals. The ingredient statements on packaged foods are the cornerstone and those will now be complete. In addition, many food manufacturers are working with the allergy professionals to provide ready access for professionals to information on specific products relative to consumer allergy diagnoses. The system also provides for timely warnings when inadvertent manufacturing errors allow product with a serious allergy risk to be shipped into food distribution channels. The food industry has also helped fund research into which constituents are responsible and how one might detect the allergens.

7) The seventh food safety area is "Ingredient Testing, New and Old." A great deal of food ingredient testing is funded within the individual companies and through cooperation with outside scientific groups, associations, universities, and government. This will continue.

Let me now comment on a few specific issues related to the food industry's interest in nutrition.

1) The first nutrition priority is "The New Label Compliance Date, May 1994."

Most of the labels on food products in stores will have the new nutrition information before the required deadline. The food industry has been very busy changing thousands of labels. New food analyses were required, new calculations run based on new regulated serving sizes, and these changes had to be coordinated with all the other label changes both required or optional due to marketing decisions. Generally, I believe the preponderance of the industry will meet the deadline of May 8, 1994 for converting to the new labels; however, I wouldn't want to be as busy as a label maker from now until May.

2) The second nutrition area is "Nutrition Label Education." The food industry will cooperate with the government and health professionals who will be rolling out significant educational programs to help educate consumers on how to best use the new nutrition labels to move toward most healthful diets for their individual needs. The food industry has already cooperated in helping to develop educational materials for health professionals to use in this effort. These materials will also be available for companies to use themselves in their interactions with professionals and consumers.

3) The third nutrition area is "Nutrient Consumption and Requirements." The National Academy of Sciences has already indicated that it wants to address the scientific issues related to minimum nutrient requirements versus nutrient requirements for a quality of life above minimum nutrient intake. The industry is very interested in the health and quality of life of our consumers and will be interested in providing input and participating in this discussion. In addition, there continues to be a strong need to obtain higher quality nutrient consumption data to help guide the development of new food for the future. The food industry supports the government's continued involvement in designing and executing quality studies on food consumption.

4) The fourth nutrition area is "Nutrient Needs of Sub-Population Groups." In both the safety and nutrition area, there is an important need to better define nutrient requirements for important sub-population groups. There are important differences by age, sex, race and physiological state. Do we know enough about the differences in both positive and avoidance needs for children, the aged, pregnant women, hypertensives, diabetics, etc.? The food industry

will continue to look at this area as an important one to help guide future product development.

5) The fifth nutrition area is "New Products, by Formulations or by Processes to Enhance Nutrition." Where there is clear consensus on nutrition needs, the food industry will develop new nutritious products either by formulating to a target nutrient composition or by using new technology, such as biotechnology, to enhance the nutrition of traditional foods. An example of the latter might be to change a traditional food to lower fat or lower saturated fat. The technology to achieve this will be coming available in the next few years.

Let me now briefly recap for you my conclusion. The U.S. food supply is abundant, safe, and nutritious. Be thankful and pleased about that. The USDA has played a major role in this success. But it is sort of like the lady who passed a friend on the sidewalk and asked her how she was doing. She said, "OK," but she had a scowl on her face. So the first lady said, "If things are OK, tell your face." I think we need to show our pleasure with the quality of our food supply in the United States. It is great and getting better.

Thank you.

Outlook '94, Session 4

For release: Tuesday, November 30, 1993

FOOD AND CONSUMER SERVICES: AGENDA FOR THE FUTURE

Remarks Prepared for Ellen Haas
Assistant Secretary for Food and Consumer Services
U.S. Department of Agriculture

I am pleased to be with you today to talk about the Department of Agriculture's nutrition and consumer agenda for the coming year.

This is the season for both reflection and resolve. It's the time we look at the year past and at the year ahead.

It was almost a year ago that President Clinton ushered in an era of change. In that short time, much has been accomplished, but much remains to be done. At USDA, we have had a busy year with food safety and nutrition, flooded farms and cities, new technology and new priorities.

Like the President, Secretary Espy has set an agenda for change. He has announced a bold plan to reinvent a bureaucracy which has remained largely unchanged since it was founded by Abraham Lincoln.

The Secretary has reorganized USDA around six central mission missions which more realistically reflect contemporary concerns and needs.

A reorganized USDA recognizes that it is not enough for us to help produce food, or even distribute it better. We need to go beyond and establish nutrition programs that promote healthful eating habits.

So at the new USDA, nutrition has become a priority mission. To underscore his commitment to providing healthful food to all Americans, the Secretary has elevated the place of nutrition and consumer affairs at USDA. Under his reorganization plan, the Assistant Secretary for Food and Consumer Services would become the Under Secretary for Food, Nutrition and Consumer Services.

President Clinton, too, has put nutrition and health at the top of the nation's agenda. In his speech to Congress, the President asked the American people to support quality, affordable

health care for all. He also talked about personal responsibility. He said, "We have to change the way we live if we ever want to be healthy as a people."

One of the ways we have to change is the way we eat. We know that diet is related to chronic disease. We have heard this from a steady stream of physicians and health professionals at the recent hearings we've held throughout the country on nutrition objectives for school meals.

The President of the American Heart Association talked forcefully of the link between diet and health and the need to establish sound eating habits early in life. Pediatricians testified about childhood obesity and the particular problems faced by low-income, minority children. One doctor told us that at least 75 percent of all diseases treated are related to poor dietary habits.

In today's world we're all in the health care business. It's true of the food industry and it's true of the Agriculture Department. We all have a role to play in the President's campaign to ensure the health of every American.

Clearly, good nutrition is good preventive medicine. The time to start learning good nutrition is, like all things, when we are young. Eating habits are firmly established by the age of 12 and we know that obesity, high cholesterol and high blood pressure are diet-related diseases which often begin in childhood.

Recently, Secretary Espy and I announced the findings of an important study which shows that the school meal programs administered by USDA fall far short of meeting the dietary--and therefore health--needs of American children.

We recognize that we have a national health responsibility to offer healthful meals to school children. The School Nutrition Dietary Assessment (SNDA) report shows we are not meeting that responsibility.

We have had federal policy on what makes a healthful diet since 1980 when USDA and the Department of Health and Human Services established the Dietary Guidelines for Americans. The Dietary Guidelines are based on sound science and are updated every five years. The SNDA report clearly shows that we are not in compliance with our own guidelines which recommend limiting daily intake of fat, saturated fat and sodium.

We *can* and we *must* do better. Nearly half the children who eat our meals are from low-income families and are at even greater risk of chronic disease than the general population. The SNDA report found that low-income children consumed the highest levels of fat.

A recent report by the American Heart Association shows that low-income Americans are at greatest risk for diet-related illnesses. The report underscores our responsibility to those we serve through our 14 food assistance programs.

The domestic food programs that I have the privilege of administering provide needy individuals and families access to the nation's abundant food supply. There can be no question of the positive effects of programs such as the Food Stamp Program, WIC, School Lunch and others in helping provide the food so many hungry people in our nation desperately need. But, we are winning only part of the battle. Providing food alone is not enough.

Over nearly half a century, USDA has woven an intricate network of programs to provide access to food. Yet, for all the good they do, our programs lack a single identity and focus. Secretary Espy and I are committed to providing them with one; nutrition assistance programs. The Secretary and I are committed to integrating nutrition into all our food assistance programs.

We're currently involved in a national discussion on ways to improve the nutritional quality of our school meal programs.

Dec. 7 we hold our fourth regional hearing--here in Washington--on how we're meeting nutrition objectives in our school meals.

The testimony we have heard so far shows this is an issue which touches everybody--inside schools and out. Parents, teachers, students, pediatricians, food service workers, cardiologists, coaches, farmers, and chefs have all testified about the absolute need for change.

It is an enormous undertaking. We provide meals to more than 25 million school children every day in 90,000 schools. But the meals we serve are far too high in fat, saturated fat and salt.

Given the scientific evidence of the link between diet and health, it is essential that we improve the nutritional quality of our school meals. We owe it to concerned parents, to taxpayers who support the program, and certainly to the millions of children who eat a school meal each day to make sure those meals meet our own dietary standards for health.

Change is never simple or easy. But it is essential. Neither those in the government nor those in the cafeteria can be afraid of change. To safeguard our children's health, we have no choice. Our school lunch initiatives could be a model for how we can incorporate a nutrition component into all our food assistance programs.

The Food Stamp Program is the nation's primary defense against hunger and the second largest public assistance program. Today, food stamps help sustain the health and well-being of 27 million Americans every month. The program represents the pledge that we will not tolerate hunger in America. It is the tangible expression of our unalterable belief that everyone has a right to food for themselves and their families.

We have a tremendous opportunity through the Food Stamp Program to educate recipients, to help them to make food purchases based on sound nutrition.

If food stamp applicants spend hours waiting to be interviewed or served--and we know this is often the case--then our reception rooms should offer bright, lively video programs that will not only engage their attention but get across our nutrition message.

We know that low-income and minority populations are at a greater risk of diet-related chronic disease. Yet, these communities and groups often haven't been reached with the nutrition message. The Food Stamp Program offers a special opportunity to promote healthful food choices among vulnerable groups.

Nutrition has been central to the WIC program since it was established. In just two decades, The Special Supplemental Program for Women, Infants and Children has grown from a pilot project operating in a few counties to a national program serving 6 million women, infants, and children each month.

WIC has been so successful, in part, because nutrition education has been built into the program. Nutrition education is an essential part of WIC. We will build on the WIC model to make nutrition education an integral part of our other food assistance programs.

To be fully successful, all our nutrition messages must be communicated more effectively.

So we are planning a comprehensive, coordinated national campaign on nutrition education.

We live in a technologically sophisticated world yet we continue to disseminate information mostly by paper pamphlet. We need to use more varied media for more persuasive and far-reaching communications. We have already begun reaching out. Secretary Espy and I met recently with the president of The Walt Disney Studios to talk about ways to reach young people with nutrition information that is lively and entertaining.

We are working with professional chefs to help both those in the school lunchroom and the school classroom see that food that's good for you can look good and taste good too.

We want to bring producers into our schools and communities to reconnect Americans to the source of their food. When this country was founded, we understood our connection to the land. It's time to reestablish the continuum from seed to supper.

When families sat down to a meal 200 years ago, children knew where their food came from because they had watched it grow. Too often today, children think food comes from the frozen case at the supermarket or the drive-through window at the fast food restaurant.

I hear the argument repeatedly that it's too hard to provide fresh produce to schools in mass quantities. Yet last month I visited a huge facility in Los Angeles where 78,000 meals a day are prepared for the city's schools. The day I was there, hundreds of workers stood in assembly lines at huge conveyer belts and prepared fresh carrot sticks for Los Angeles school children to dip in peanut butter that day. It can be done.

Everyone needs to be committed to better health. Indeed, the work is already beginning. No one has been more creative than the groups representing our agricultural commodities. The market has responded to the call for more nutritious foods with low-fat, low cholesterol and low-sodium products that are appetizing and healthful.

The meat and dairy industries have worked to provide lower-fat products to the market.

But we need to go even further. We want to forge partnerships with state and local governments, community-based organizations, industry and other institutions so that no one is left out. I strongly support building coalitions to achieve shared policy goals. All who are part of the food system--consumers, farmers, industry, and government--have a stake in improving the nutritional well-being of our citizens.

Our agenda is an agenda for change. For too long, we have talked about the virtues of good nutrition, but done too little to practice what we preach. Since the Federal Government began providing food assistance to needy Americans more than 40 years ago, we have created an intricate network of food programs that provide access to food, but lack a preventive health focus. And yet, hunger is a public health issue.

The change we are talking about in our programs is not a simple 'silver bullet' approach, but rather an integration of nutrition into the heart of the Federal food programs. Just as the "buckle-up" campaign has saved lives, we need to "buckle-up" with a positive image of proper nutrition. We need a campaign that is comprehensive, consistent and can be sustained over time.

Our programs touch the lives of more than 1 in every 6 Americans every day. I believe it is essential that Federal food assistance policies refocus on their nutritional mission.

We have been entrusted as the guardians of our nation's health. We have established fine objectives, but we have not yet adequately met them. We must begin to close the gap between the dietary guidelines and their application in food programs. We will close that gap. The health of our future depends upon the future of our health.

Outlook '94

For Release: Tuesday, November 30, 1993

THE NUTRITION-HEALTH CONNECTION: USDA DIETARY
GUIDANCE POLICIES

Marion Nestle, PhD, MPH
Professor and Chair
Department of Nutrition, Food and Hotel Management
New York University

It is a pleasure and a privilege to be here with you this afternoon. It isn't often that a nutritionist gets to talk to people who have so much to do with food in this country. As I understand it, my task is to take on the questions of why the Department of Agriculture should be involved in nutrition issues and what, exactly, it should be doing about them. This is a large order, but the questions do make sense.

These days, our principal domestic policy issue is health care reform. The President has called on us to refocus our health care system so that it will emphasize health promotion and disease prevention--the positive actions we can take to improve our own health.

Among these actions, diet is ranked number two, just after cigarettes. Recent estimates suggest that smoking contributes to 400,000 of the 2 million annual deaths in this country, and that diet and lack of exercise contribute to another 300,000. This alone tells us that diet matters, and that it matters a lot. And it is worth doing something about.

We know what to do about diet. We want everyone to have access to a diet that contains all the nutrients needed to prevent deficiencies as well as conditions due to dietary excesses. But people do not eat nutrients--they eat food. Therefore, anything that has to do with food affects nutrition. Therefore, nutrition policies necessarily begin with agricultural policies.

This fundamental point was recognized from the moment the USDA was created in 1862. Its initial mandates were to promote agriculture as well as to "diffuse among the people of the United States useful information on subjects connected with agriculture in the most general and comprehensive sense of that word." It did all this, right from the beginning.

By the late 1890s, W.O. Atwater, the USDA's star researcher, had published tables of food composition, estimates of the nutrient requirements of individuals performing various levels of work, and dietary recommendations for disease prevention. Atwater was way ahead of his time, but he established connections between food and nutrition that have lasted to this day.

Since Atwater's time, the USDA has produced materials to educate the public about the nutritional value of foods, the role of specific foods in the diet, and patterns of dietary intake that best promote health. As long as this advice focused on prevention of nutrient deficiencies, and suggested eating more of foods from various groups, nobody objected.

This situation changed when dietary advice shifted from eat more to eat less. In 1900, tuberculosis, pneumonia, and influenza were the leading causes of adult deaths, and heart disease and cancer together accounted for only 12% of annual deaths. Advice to eat more made sense.

By the mid-1950s, heart disease and cancer had become the leading causes of death, and researchers were already arguing about whether diet had anything to do with them. As research increasingly demonstrated associations between diet and chronic diseases, new dietary advice was needed. Advice to eat less fat, saturated fat, cholesterol, salt, and sugar was controversial right from the start.

Despite the arguments, enough information was considered available to justify production of major reports on diet and disease risk in the late 1980s--the Surgeon General's Report on Nutrition and Health, the National Academy of Sciences' Diet and Health study, and the World Health Organization's Healthy People. By 1992, more than 100 reports from 36 countries throughout the world had reviewed the research evidence and had come to the same conclusions. These reports concluded that:

- o Six of the ten leading causes of death are related to diets too high in calories, fat, saturated fat, cholesterol, salt, or alcohol, and too low in fiber.

- o Similar dietary recommendations will reduce risks for multiple chronic diseases.
- o The evidence is sufficient to justify public health campaigns to reduce dietary risks.

USDA's policy contributions to this collective effort are the Dietary Guidelines for Americans (1990), and the Food Guide Pyramid (1992).

The Dietary Guidelines include seven recommendations:

- o Eat a variety of foods.
- o Maintain healthy weight.
- o Choose a diet low in fat, saturated fat, and cholesterol.
- o Choose a diet with plenty of vegetables, fruits, and grain products.
- o Use sugars only in moderation.
- o Use salt and sodium only in moderation.
- o If you drink alcoholic beverages, do so in moderation.

These statements are vague and subject to a variety of interpretations as to the meanings of "healthy," "low," "plenty," and "moderation." To translate them into actual food choices, USDA staff produced the Food Guide Pyramid. This publication recommends specific numbers of daily servings of foods from various groups:

- o 6-11 servings from the grain group.
- o 3-5 servings from the vegetable group.
- o 2-4 servings from the fruit group.
- o 2-3 servings each from the meat and dairy groups.
- o no recommended servings from fats and sweets.

Embedded in both of these documents are target levels for the upper limits of consumption of certain nutrients: fat at 30% of calories or less, saturated fat at 10% of calories or less, and cholesterol at 300 mg/day or less. Also embedded is the recommendation to eat more fiber.

Despite the virtual unanimity of such recommendations, they remain highly controversial. For more than 30 years, scientists, food industry representatives, and government officials have been arguing about whether the research basis justifies recommended dietary changes. Is fat really associated with breast cancer? Cholesterol with heart disease? Fiber with bowel cancer? You have seen these arguments. But so have the committees that issued dietary recommendations. All of them considered the evidence strong enough to justify action.

This is a curious situation. How can there be an international consensus on dietary recommendations based on research that is incomplete, uncertain, sometimes contradictory, and endlessly debated?

The explanation may be quite simple. Research that focuses on single nutrients such as fat, specific fatty acids, sodium, or vitamins is always going to be suspect. People do not eat single nutrients; they eat food. Evidence for the overwhelming health benefits of diets containing a large proportion of calories from fruits, vegetables, and grains, and with meat, dairy, processed foods, and alcohol comprising a much smaller proportion, is not in question and never has been in question.

That is why the Dietary Guidelines have survived controversy and are in a third edition, and that is why we have the Food Guide Pyramid. Advice about optimal food choices has remained the same throughout decades of debates over nutritional details.

If this point is not widely recognized, it may be because advice to eat more fruits and vegetables does not sound very interesting. It may also be difficult to follow in societies like ours where more and more meals are eaten outside the home. And, perhaps most important, such advice is likely to lead to reductions in intake of meat, dairy, and many processed foods that are principal sources of fat, cholesterol, salt, and sugar in the American diet. The history of dietary recommendations suggests that any advice to eat less of these foods will almost certainly lead to unpleasant political repercussions.

The scientific basis of dietary advice is no longer really an issue. What is at issue is putting this advice into practice. The USDA now has an unparalleled opportunity to integrate its food and dietary guidance policies so as to improve the health of Americans.

Here is my personal wish list for actions USDA might take to implement dietary advice in the policy areas of food assistance, nutrition monitoring, agricultural support, food and nutrition research, and nutrition education.

Food Assistance: Ellen Haas has made improving the School Lunch Program a major priority. And rightly so. Schools bear special responsibility--and have a special opportunity--to set nutritional standards for American children. Substantial evidence identifies increasing levels of chronic disease risk factors among school children; they are more obese, less fit, and have higher blood pressure and blood cholesterol levels than they did 10 or 20 years ago.

Although there may be financial and other barriers to improving school meals--the 15 minute lunch period is one obvious example--we know it can be done and we know how to do it. USDA could support current efforts of school food service personnel by changing its policies to:

- o Supply commodity foods of better quality,
- o Restructure menu plans to allow for more servings of fruits, vegetables, and grains,
- o Get Congress to eliminate requirements for whole milk,
- o Set better nutritional standards for lunches, commodities, and vended foods,
- o Regulate the sale and service of competitive foods.
- o Put some real money behind the Nutrition Education and Training program so that every school meal program is supported by well designed classroom instruction.

Food and Nutrition Monitoring: It is no secret that USDA's past efforts in food intake and nutrition status monitoring could stand improvement. Weaknesses in this area are keeping the GAO very busy these days. It is absolutely essential that USDA put whatever resources are necessary into improving the accuracy and reliability of the data it collects on:

- o Food supply disappearance (food "consumption" data).
- o The nutrient composition of foods (Handbook 8).

- o Household and individual dietary intake (NFCS and CSFII).

Our national nutrition policies depend on such data. They are the basis of all research and education programs related to food and nutrients. The problems are fixable, and they can be fixed if USDA makes it a priority to do so. It should, and right away.

Agricultural Support: USDA has numerous policies that support production and marketing of meat, dairy, and processed foods. These policies can be used as models for new policies designed to promote greater production and consumption of fruits, vegetables, and grains. For example:

- o Price supports to producers and marketers of fresh fruits and vegetables.
- o Generic marketing (check-off) programs for fruits, vegetables, and grains.
- o Subsidies for farmers' markets.
- o Subsidies for purchase coupons for fruits and vegetables.

Food and Nutrition Research: It is always useful to outline a detailed research agenda but I will simply note at this point that if the ideas I have suggested seem too far-fetched, USDA might sponsor small-scale pilot studies to evaluate the effectiveness of such proposals.

Nutrition Education: I've left education for last because I believe that it is a necessary--but not sufficient--action to improve dietary intake. The other actions are equally important, and should be addressed at the same time. In this country, educated people have the best diets and the best health. Many, many programs have demonstrated that nutrition education improves dietary intake and lowers chronic disease risk factors. The food industry knows very well how to educate the public to buy its products. I'd like to see USDA use the best marketing techniques available to encourage pyramid-type dietary patterns among all its constituents. These include, of course:

- o Parents, teachers, and school children.
- o Food Stamp recipients.
- o WIC recipients.

- o Extension program clients.
- o The general public.

I'm told that USDA's education budget is about \$200 million per year, but that this amount is split among 7 separate agencies. This situation cries for coordination, particularly since this amount is only a drop in the bucket compared to the 12 billion dollars spent annually on advertising by the food industry. I'd like to see USDA piggy back some of those dollars and cooperate with the National Cancer Institute to promote the 5-A-Day program, its national campaign to increase average consumption of fruits and vegetables to 5 servings a day. This campaign has a simple, positive, countable message, one that is easy to evaluate. USDA could help get that message into all its school, food assistance, and extension programs. This alone, could make a big difference.

I'm sure all of you can think of additional actions that might be useful. The take home message is simple. USDA can do much to promote healthier diets for all children and adults in this country. I hope that all of you will join me in encouraging its new leadership to do so, and as quickly as possible. I appreciate the opportunity to share these thoughts with you this afternoon.

Outlook '93

For Release: Tuesday, November 30, 1993

USDA'S RESPONSIBILITY TO CONSUMERS

Michael F. Jacobson, Ph.D.
Executive Director
Center for Science in the Public Interest
Washington, D.C.

American farmers and food industry have much to be proud of when it comes to feeding people. Most Americans have plenty of food to eat at relatively low prices. And the kinds of food we eat have virtually eliminated classic nutritional deficiency diseases, such as scurvy, beri-beri, and pellagra. However, as malnutrition has been vanquished, medical research has discovered that the typical American diet promotes some of the most common chronic diseases. Tooth decay, constipation, obesity, diabetes, coronary heart disease, hypertension, stroke, and several types of cancer are strongly linked to the foods people eat. Those diseases account for hundreds of thousands of deaths each year and cost our country well over one hundred billion dollars a year. Diet accounts for more deaths each year than anything except cigarettes. The diet responsible for such illnesses, as the National Academy of Sciences and other agencies have concluded, is a diet high in fat -- especially saturated fat -- cholesterol, sodium, and sugar, and low in dietary fiber. Additional problems are caused by pesticide residues and food additives.

By contrast, diets low in fat, cholesterol, and sodium and rich in whole grains, vegetables, and fruit maximize the chances of staying healthy and avoiding diet-related diseases. Even more remarkable, studies done in the past twenty years have demonstrated that even advanced cases of heart disease, hypertension, and diabetes can actually be reversed by appropriate dietary changes.

As the government's lead agency for both nutrition education and feeding programs, USDA has opportunities and obligations to encourage Americans to eat the most healthful diets. The Clinton administration comes to these problems with a clean slate, fresh ideas, and enthusiasm. I'd like to suggest some of the things that I think USDA ought to do.

A. Nutrition Education for the General Public

Perhaps most importantly, USDA needs to do a much better job of informing the public about, and encouraging the public to choose, a better diet. USDA should gear information to a variety of educational levels, ages, dietary patterns, and ethnic or racial

backgrounds.

For starters, USDA -- in cooperation with the Department of Health and Human Services -- should tell the public what the best possible diet is. The public should know what diet would most effectively promote health and ward off disease. Currently, the government's recommendations call for only modest dietary changes. The current recommendations represent a political and cultural compromise: industries are not offended, and people aren't made to feel they must make substantial changes. The recommended diet is certainly not the best diet and would result in only modest health benefits. The kind of diet I have in mind might recommend a fat level of 20 percent of calories or less, saturated fat plus trans fats under 7 percent, a cholesterol intake of no more than 100 milligrams daily, and routine consumption of whole grains instead of refined grains.

USDA should also cater to the needs of people on special diets -- such as vegetarians or people who wish to eat very-low-fat diets -- and provide them with responsible information. USDA should up-date its nutrition information and also provide information in new formats, such as videos, radio and TV announcements, and even billboards.

USDA's food triangle is one important educational vehicle that needs to be expanded upon. The triangle is fine for young children, but it is rather simplistic for older, more sophisticated people. For instance, fatty ice cream and skim milk are grouped together in the dairy group; fatty pot roast and fat-free lentils are in the meat-and-protein group. At the very least, USDA ought to develop a true pyramid that divides the foods in each food group into "anytime," "sometimes," and "seldom" categories based on the food's content of fat, saturated fat, sodium, and other nutrients. Thus, lentils and skim milk would be anytime foods; chicken drumstick with skin and 2% lowfat milk would be "sometimes" foods; and pot roast and ice cream would be in the "seldom" category.

USDA's Nutrition Research and Education Service has a mission to improve the diets of all Americans, but a 1993 budget of only \$1.2 million for nutrition education. If USDA is to remain the lead agency for nutrition education, it must seek funding at a far higher level, in line with the challenges before it.

USDA should also not be facilitating educational campaigns that undermine good nutrition. Currently, USDA helps the beef, dairy, pork, and egg industries promote their products by means of research and promotion boards. If you ask most nutritionists, or look at USDA's food triangle, it's perfectly obvious that Americans should be eating less of those foods, not more. And some of the ad campaigns are even inconsistent with USDA and FDA's labeling rules for nutrition claims. For instance, the pork industry has advertised that pork has less fat, calories, and cholesterol than the same size piece of chicken, but the ads compare one of the leanest cuts of pork to a medium-fat piece of chicken. The National Dairy Board advertises that the vitamin A in milk keeps skin smooth, the calcium builds strong bones, and the protein builds muscle -- even though

whole milk is loaded with saturated fat and cholesterol, which promote heart disease. USDA should dissociate itself from programs that encourage the consumption of disease-promoting foods.

Finally, USDA should make sure that deceptive advertising does not undermine restrictions on health and nutrition claims in food labeling. Currently, companies can make claims in advertising that they are not permitted to make on labels. USDA should urge the Federal Trade Commission to issue regulations on food advertising that are fully consistent with FDA and USDA's labeling rules regarding health and nutrition claims.

B. Educating Food-Stamp Recipients

USDA also has an opportunity to educate the 27 million Americans who participate in the food-stamp program. Unfortunately, it's largely a missed opportunity. Only one seventieth of one percent (0.015%) of the food-stamp budget goes toward food education.

Funding for a major educational campaign aimed at food-stamp recipients could come from the money that food retailers and USDA will save as the EBT, or Electronic Benefits Transfer system, is phased in in the next few years. EBT is expected to save retailers about \$135 million and USDA about \$27 million each year. Devoting half of those savings to a comprehensive educational program -- using the mass media and other social-marketing approaches -- could really help low-income Americans make the best use of their food-stamp dollars. The funding mechanism would call on retailers to designate one-third of one percent of their food-stamp sales to the educational fund. I don't think that's asking too much of an industry that benefits greatly from the food stamp program. After all, food stamps are a form of currency -- \$21 billion worth in 1992, and \$215 billion (inflation-adjusted) since 1980 -- that can only be spent in food stores.

C. Nutrition Education and Training Program

To improve the foods and the educational programs in schools, the Nutrition Education and Training Program -- or NET -- should be strengthened. The program is an excellent way of educating both kids and food-service workers. USDA should ask Congress for \$35 million (the funding level in 1980, adjusted for inflation) for NET. Although the NET program is currently authorized at \$25 million, less than half that amount has been appropriated.

D. National School Lunch Program

In addition to mounting educational programs, USDA's food and feeding programs provide a more direct means for improving diets. One such program is the National School Lunch Program, which feeds some 25 million children daily. Kids ought to be encouraged to eat a diet that promotes health and that teaches eating habits that

will last a lifetime. USDA surveys, however, indicate that school lunches are far too high in fat and sodium. The average meal gets 38 percent of its calories from fat -- compared to the recommended 30 percent -- and half again more than the recommended level of saturated fat. In other words, schools actually provide diets that are bad for children's health.

USDA should set quantitative standards for the fat, saturated fat, cholesterol, fiber, and sodium content of school lunches and breakfasts. Those standards should be based on "Dietary Guidelines for Americans" and other authoritative recommendations issued by government and the National Academy of Sciences.

So-called "competitive" foods should be held to similar nutritional standards as school lunches. The Department should require that every food sold at snack bars, vending machines, and other means in schools meets standards for fat, saturated fat, and other nutrients. Furthermore, to help schools serve more nutritious meals, USDA should require vendors to provide nutrition information on all products sold to schools. Ideally, all of those improvements would be in place for the beginning of the 1994-95 school year so as to spare children yet another year of unhealthy meals.

E. USDA Commodities

Ironically, some federally-subsidized food commodities are an impediment to offering wholesome school lunches. In 1992, \$675 million in commodities was donated to school lunch and breakfast programs. Those commodities -- in the form of processed cheese, frozen or canned meats, canned fruits and vegetables, oils, butter, flour, and other staples -- represent one fifth of each school meal.

Many commodities are high in fat. We have calculated that half the calories of all commodities come from fat. That's far more than the dietary goal of 30 percent. For example, even among vegetable commodities, a fatty potato product similar to Tater Tots tops donations. That bite-sized product gets 42 percent of its calories from fat, whereas a baked potato has less than 1 percent calories from fat. To add insult to injury, USDA recommends they be served "with melted cheese or gravy." USDA should revise its food purchasing practices and offer schools a more healthful mix of commodities.

Fatty commodities are also a problem for Native American communities. Last year, more than 40,000 Native American households received commodities on a monthly basis. According to the U.S. General Accounting Office, over half of those households included at least one adult with nutrition-related health problems. Those high rates of diabetes and heart disease indicate a need for lower-fat commodities.

F. Making Food Safer

While nutrition is the biggest problem related to the food we eat, it is essential that that food be grown and processed in ways that are as safe as possible for farmers, consumers, and the environment. It has been heartening to see USDA develop plans

with the FDA and the EPA to reduce farmers' dependency on pesticides. While pesticides sometimes provide valuable protection against insects, microorganisms, and weeds, they all too often endanger wildlife and farmers, despoil the land and water, and add modestly to the risk of cancer for consumers. Thousands of farmers are finding that they can greatly reduce, or even eliminate, the use of potentially toxic pesticides. While doing so requires sophisticated management skills, farmers are often rewarded with safer working conditions and premium prices at the market place. I hope that USDA will expand its efforts to support organic and sustainable agriculture. Such efforts could involve a range of strategies:

- * first would be to finalize the regulations defining the term "organic," as required in the 1990 Farm Bill. A national definition would pave the way for major growers and processors to increase the value of their products by growing or using organic foods.
- * Next, USDA, together with states, should actively encourage farmers to adopt organic or sustainable methods. Ideally, the government would provide a financial safety net to assure farmers that they won't go broke as they reduce their use of chemicals. Simultaneously, USDA should highlight to farmers and consumers the advantages of organically grown food to themselves and the environment.
- * USDA should encourage states to boost taxes on pesticides and fertilizer and earmark those revenues to mount vigorous campaigns to reduce agri-chemical use and repair the harm they have caused.

Finally, USDA needs to work closely with industry and consumer groups to solve the problem of foodborne illness. Almost ten thousand people die every year from food poisoning. That's a toll we should no longer tolerate. While food poisoning may never be completely vanquished, USDA -- in cooperation with FDA -- could move aggressively to improve the way poultry and cattle are grown and slaughtered. While some have advocated food irradiation as the solution, I think that other approaches make more sense and would be more acceptable to consumers. Livestock feed should not contain pathogens. Poultry, hog, and cattle growers need to clean up their operations. Slaughterhouses must be cleaned up, and sick animals must be kept from healthy ones. Treating carcasses with inexpensive, innocuous chemicals like trisodium phosphate and acetic acid should be used to reduce bacterial loads. Finally, consumers need to be educated, and handling and cooking information needs to be put on labels of all foods that pose a risk of food poisoning, including poultry, red meat, and eggs.

Conclusion

Let me conclude by reiterating that the public expects USDA -- a sleeping giant when it comes to food safety and nutrition -- to use its tremendous power to improve the nation's diet and, thus, their health in the coming years. Come 1996, the public should evaluate USDA's performance on the basis of the effectiveness and visibility of USDA's educational programs, improvements in school meals, changes in the commodities

program, and a significant reduction in food poisoning. I look forward to great accomplishments from Secretary Espy's fine team.

Strictly Embargoed for Release at 8:00 a.m., December 1, 1993

U.S. AGRICULTURAL OUTLOOK

James R. Donald
Chairperson, World Agricultural Outlook Board
U.S. Department of Agriculture

Nature was unkind to many farmers in 1993. Flood, drought and associated problems ranging from late planting to disease reduced many a farmer's crop. Crop production in 1993 is a tenth below last year's record.

As we look ahead to 1994, there are some positive signs of improvement that should help those hardest hit to get back on their feet, and put the United States in a better position to supply our customers at home and abroad.

With a return to normal weather, farm output should recover. Crop production is likely to rise 5 to 10 percent next year. Add to that prospects for record production of animal products. In all, total farm output could be up around 5 percent.

This larger output and higher crop prices will mean increased marketing receipts for farmers in 1994; but Government payments are likely to be lower in the absence of disastrous weather and production expenses will move up with expanded crop acreage and higher prices for a few inputs, including those for feed.

This would suggest net cash income of \$55 to \$62 billion, with the midpoint about matching the \$59 billion forecast for 1993. The coming year should prove better for farmers who suffered severe production and income losses to floods and drought in 1993.

After adjusting for changes in the value of inventory, projected net farm income of \$47 to \$54 billion in 1994, with the mid-point of the range about 15 percent above the nearly \$44 billion forecast for 1993. Expanded crop production next year and an increase in the value of inventories will push up net farm income.

Farm operator household income in 1994 is expected to move higher with further improvement in the economy.

The 1994 outlook for U.S. consumers is for a moderate rise of 2 to 4 percent in retail food prices, following the expected 2 percent rise in 1993. Larger food production in 1994 and a

moderate rise in food marketing costs, reflecting slow inflation in the economy, will hold down the increase in food prices. The effects of prospects for another sharp drop in crop production next year would primarily impact on animal product output and food prices in late 1994 and into 1995.

The demand outlook for agricultural products in 1994 calls for continuing relatively strong domestic use of crops, as animal product production expands and as U.S. economic recovery provides some support to commodity prices.

U.S. export demand should benefit from continued economic growth in many developing countries and some recovery in developed economies, particularly in Western Europe and Japan; still, U.S. exports will face large supplies in both customer and competitor countries. Despite lower export volumes for bulk commodities, higher prices for corn and soybeans and increased exports of high value products will keep the value of U.S. agricultural exports in FY 1994 at \$42.5 billion, the same as FY 1993. With imports projected to again total \$24.5 billion, the U.S. trade surplus will remain at \$18 billion in fiscal 1994.

WORLD COMMODITY OUTLOOK

Production outside the United States is increasing for most crops in 1993/94, but U.S. output is off sharply and will pull world production down. Favorable weather has upped potential output in a number of producing countries and several others will see production down only slightly from last year. Animal product output will reach a new record as pork and poultry supplies continue to expand.

World commodity demand will be stronger in response to: Real economic growth of 2 1/2 to 3 percent, double the increase estimated for 1993; and population growth continuing at about 1.7 percent. Demand growth will be especially strong in Asia and parts of Latin America. Larger grain crops will lead to an expansion in consumption in some countries; but in the Former Soviet Union (FSU), dropping industrial production, limited financial resources and adjustments to market reform will mean a continued contraction in consumption. For the United States, grain exports will drop in response to weak import demand and increased competition in world markets. These same factors are limiting the gain in cotton exports. U.S. exports of animal and horticultural products will continue to increase in 1993/94.

U.S. domestic demand for commodities will benefit from U.S. economic expansion of 3 to 3 1/2 percent and population growth of about 1 percent.

Total Grains

World 1993/94 grain production, trade and ending stocks are expected to be off sharply from a year earlier, but consumption is projected up slightly to a new record. While poor growing conditions in the United States and parts of East Asia, especially for Japan's rice crop, will have the greatest impact on these world projections, there are a number of other significant country and regional developments. Cool, wet conditions at harvest cut prospective yields in the FSU, but shrinking demand and smaller subsidies, along with poor financial resources, will drop use and imports. Parts of North Africa suffered through another poor season and will have to expand imports. However, much of South Asia had good growing conditions. Also timely rains led to a rebound in crops across southern Africa and the region is once again expected to be a net exporter of corn. China had large crops again and it is expected to have record exports of corn for the fourth consecutive year.

Global grain production is forecast down 5 percent, largely because of a 31-percent drop in U.S. corn crop. Foreign output is practically the same as a year earlier as a lower rice crop offsets higher coarse grain production. World grain consumption is projected up slightly from a year earlier, as expanding foreign use more than offsets lower consumption in the United States. FSU consumption is expected to drop again in response to reduced consumer subsidies and difficult economic conditions. However, robust economic growth and/or larger crops are leading to expanding consumption throughout much of Asia and parts of Latin America. The EC will also increase grain consumption, largely in livestock feedings, as CAP reform sharply reduces prices.

Forecast 1993/94 U.S. grain production is down 25 percent from last year's record as yields for all the feed grains, especially corn, were down sharply and wheat and rice yields were lower, too. While 1993/94 domestic use and exports are projected down from last year, the huge production drop will be overwhelming and stocks will fall sharply, possibly to their lowest level since the mid-1970's. With weaker global import demand and increased competition, U.S. grain exports will likely drop to their lowest level since the mid-1980's.

Wheat

The global wheat outlook for 1993/94 is highlighted by slightly smaller production and ending stocks, expanding consumption, but significantly smaller world trade. While world wheat production is down slightly from last year, higher carryin stocks are raising total supplies. Output declines are dominated by the EC,

the FSU and the United States. Eastern Europe, China, India, Turkey and several other countries are expecting significant gains in production. Projected consumption gains are widespread throughout Asia, Europe and the Middle East. Most of the projected drop in foreign ending stocks is in the FSU and the EC.

The outlook for U.S. wheat in 1993/94 is for slightly larger supplies, higher domestic use, but sharply lower exports than last year. The smaller total use is projected well below production and imports, so 1993/94 ending stocks are expected to be up nearly 30 percent.

Wheat harvested acres are up 1 percent, largely because of smaller area idled under government programs and higher prices. While total wheat yields were down one bushel per acre last year, prolonged cool, wet conditions led to disease problems, especially in several spring wheat producing areas. Durum and other spring wheat yields were off 4.5 and 7.8 bushels per acre, respectively, from last year's records.

Total use is projected down 5 percent from 1992/93 because of an expected 17 percent drop in exports. Wheat feed and food use, however, are expected to be up from last year's levels.

World wheat trade in 1993/94 is forecast down 9 percent from last year's near-record to the lowest level since 1986/87. While a number of countries are expected to show significant gains or reductions in imports from last year, the FSU and China continue to be the main focus. Import declines of 28 and 9 percent, respectively, are forecast for the FSU and China.

Despite the smaller crops in the EC and Canada, the relatively large stocks in most competing countries and reduced world trade mean continued strong competition for markets. The EC entered 1993/94 with record stocks, which will provide ample supplies to export, despite a reduced 1993 crop and expanding consumption. Canada also entered the year with relatively big stocks and, despite a lower 1993 crop, supplies will remain relatively large. However, Canada's exports will be limited by another poor quality crop. Both Australia and Argentina are expected to have larger crops and exports equal to, or larger than last year. Thus, U.S. exports are forecast down sharply and the U.S. share of the world market will drop.

U.S. wheat plantings for the 1994 crop will likely be up if weather conditions are favorable. Although the ARP is the same as last year's "0", some land expected to be planted to wheat in 1993 was not planted because of unfavorable conditions. As usual, foreign production will importantly depend on the FSU. Planting progress reports point to a drop in winter grains in the

FSU. Given normal weather, a rebound in production can be expected in North Africa. A major uncertainty is how producers in the EC will respond to the reduced support prices and required idling of cropland, although relative yields seem to favor wheat over other crops. The major foreign competitors' exportable supplies will likely remain relatively large in 1994/95 even with a drop in carryin stock.

Rice

Global rice production in 1992/93 is forecast at 344 million metric tons, down 2 percent from last year's harvest. Smaller crops in China, Japan, the Philippines, South Korea and the United States account for much of the decline. Slightly larger crops are forecast for India and Vietnam. Global consumption is forecast up, while world ending stocks are expected to decline 22 percent from last year. World trade in calendar 1994 is forecast to rise 10 percent to around 15.4 million metric tons.

U.S. production in 1993/94 is forecast at 162.0 million cwt, down 10 percent from last year. Domestic and residual use is forecast to rise 3 1/2 percent, while exports are projected to increase 10 percent. U.S. market share is expected to slightly rise to 18.2 percent in calendar 1994 compared with 17.9 percent in 1993. Carryout stocks in 1993/94 are forecast to fall 40 percent. The season-average price is forecast at \$8.00-\$9.50 per cwt, compared with \$5.90 estimated for 1991/92.

Given normal weather, global rice production could expand next year. World prices are expected to remain at an increased level as import demand, particularly from Japan, will continue to be strong and competitor supplies will remain relatively tight.

Coarse Grains

The 1993/94 outlook for world coarse grains is dominated by the sharply smaller U.S. corn crop. Outside of the United States, production is expected to be up 1 percent and stocks are projected down 9 percent from a year earlier, with consumption largely unchanged, but exports up sharply.

World coarse grain production for 1993/94 is forecast down 9 percent from last year because of the huge drop in the U.S. crop. The rest of the world is expected to show a small increase from 1992/93, led by 25 percent gain in Canada. Global supplies are off 5 percent as the larger U.S. carryin stocks and foreign output only partially offset the smaller U.S. crop. World consumption is forecast up marginally as foreign use expands but consumption drops in the United States.

U.S. 1993/94 feed grain supplies are forecast down 17 percent as the larger carryin stocks will only partially offset the 30 percent drop in feed grain production. While smaller exports and domestic use are expected to push total use down 8 percent from a year earlier, use will remain well above production and ending stocks will shrink to their lowest level since 1975/76.

This year's corn crop of 6.5 billion bushels is down 31 percent from the 1992 record as yields are down 22 percent from last year's record and the lowest since 1988 and harvested acres are down 12 percent. Yields and harvested acres are also down for the other feed grains. Output changes from last year range from a 30-percent drop for sorghum to a 9 percent reduction for barley. Domestic use of corn is expected to decline in 1993/94 for the first time since the 1988/89 year because of smaller supplies and higher prices. Also exports are forecast down sharply from 1992/93. Despite the projected 9 percent drop, total use will exceed production by more than 1.2 billion bushels. Corn stocks will drop below one billion bushels for the first time since 1975/76. Ending stocks of the other feed grains are also expected to drop sharply.

World corn trade is forecast down 8 percent for 1993/94, largely because of reduced imports by southern Africa and Eastern Europe. Also, the sharply lower U.S. corn supplies and higher prices will mean some importers will turn to other coarse grains and wheat for their import needs.

For many years, the FSU has been the major determinant of the level of world corn trade and this year will be no different. While larger FSU domestic procurements are expected and reduced subsidies and economic contraction will reduce needs, financial assistance will still be a key determinant in 1993/94 FSU imports of corn.

U.S. corn exports for 1993/94 are forecast down one-fifth because of reduced global imports and increased competition from China, South Africa and the EC.

Looking ahead to 1994, U.S. corn production will likely increase, assuming trend yields and higher planted acres in response to reduced area idled under government programs and higher prices. Foreign coarse grain production will largely depend on FSU production, but normal weather would lead to a rebound in output in Eastern Europe. A major uncertainty is in the EC as producers respond to the reduced support prices and required idling of cropland. Historical relationships would indicate that coarse grains, especially barley, are at a disadvantage compared with other crops.

Oilseeds

The global oilseeds outlook for 1993/94 is for sluggish demand and stagnant to declining trade. Nevertheless oilseed inventories are expected to decline to the lowest levels since 1984/85, reflecting a large drop in U.S. production. With foreign oilseed supplies forecast to reach record levels, U.S. exports of soybeans and soybean meal will be down sharply from year-earlier levels and the U.S. market share for soybeans and soybean meal will drop to their lowest levels ever.

In sharp contrast to slow global demand growth for protein meal feeds, vegetable oil demand is forecast to grow more rapidly while supplies lag. As a result, world ending vegetable oil stocks will fall sharply from last year and be substantially below the peak levels reached in 1989/90. Stocks relative to use will be the lowest since the mid-1970's, providing good underlying support for vegetable oil prices and in turn some support for oilseed prices.

The world protein meal outlook is dominated by events in the EC, Eastern Europe and the FSU. These regions account for about 40 percent of foreign protein use and even a larger share of world trade. Consumption in these regions could be down by 1 to 3 percent from 1992/93 with much of the decline concentrated in the EC. Continuing financial and credit concerns, along with declining livestock herds, are hurting Eastern Europe and the FSU while the implementations of CAP reform policies in the EC are leading to a substantial drop in grain prices relative to protein feeds, encouraging substitution of grain feeds for protein meals. While protein growth is also stagnant in some other industrial markets, like Japan, rapid growth is forecast for several emerging market countries in Latin America, Southeast Asia and North Africa.

Global oilseed production in 1993/94 is forecast at 223.5 million tons, down less than 1.5 percent from last year's record outturn. A sharp decline in U.S. oilseed output, mainly soybeans, is largely offset by record foreign crops with foreign soybean production rising by over 5 million tons due to strong gains in India, Canada and China and more modest gains in South America. U.S. soybean production prospects in 1993/94 were hit with the unexpected wet weather and excessive flooding problems in the Midwest while the Southeast experienced widespread drought. Yet, some large producing states, such as Indiana and Illinois, are turning out yields above year earlier levels, limiting the drop in U.S. average yields to much less than in previous poor weather years.

U.S. soybean exports are forecast to drop to 625 million bushels, down about 19 percent from last year. Soybean meal exports are likely to fall by 19 percent as well, pulling down the U.S. soybean crush to 1,225 million bushels, a 4 percent drop. A continued strong U.S. domestic feed offtake helped by rising poultry output is preventing a much larger drop in soybean crushings. As indicated already, both larger foreign supplies, mainly soybeans, and slow meal demand growth in Europe are pulling down U.S. exports. U.S. market share for soybeans and soybean meal combined will likely be at a new low of 36 percent or less, down from about 50 percent in the mid-1980's and below last year's 44 percent share.

With a lower U.S. crush, soybean oil inventories are dropping to their lowest levels since 1985/86. Soybean oil exports are forecast to drop while domestic use remains close to last year's high levels. Reduced U.S. availabilities and higher prices are a big factor in reducing the soybean oil export forecast to 1.35 billion pounds from 1992/93's 1.5 billion. Domestic soybean oil use gains will be limited by increased availabilities of other oils, particularly canola oil from Canada.

Looking forward to 1994/95, global oilseed supplies will likely be at record levels in the absence of any serious crop weather problems in the main producing countries. Most of this gain will likely be in the United States, based on more normal crop yields and a slight expansion in area. Reductions in U.S. set-aside acres and a favorable soybean to competitive crop price ratio will encourage more U.S. soybeans as well as sunflowerseed plantings.

While foreign oilseed supplies may show little gain in 1994/95, demand weakness for protein feeds will likely persist, particularly in Europe and in the FSU. As a consequence, U.S. soybean and soybean meal exports may show only a small recovery from this year's lower levels, helped by growth mainly in emerging markets, such as Mexico. Domestic soybean meal use should show a modest rise, helping soybean crush to recover but not likely to the record 1992/93 crush of 1,279 million tons.

With U.S. use gains up much less than total supplies U.S. soybean stocks should rise to higher levels of 250 to 300 million bushels.

Season average soybean farm prices in 1994/95 would be expected to drop to levels near or slightly above those seen in 1992/93.

Cotton

The world cotton outlook for 1993/94 is highlighted by a second consecutive season of relatively small production, stable use, and declining stocks. Output this year is projected at nearly 83 million bales, virtually unchanged from 1992/93 as 3-percent smaller area is offsetting 3-percent higher yields. While China's production is down nearly one-tenth because of smaller area, output is up in Pakistan, the FSU, India, and several Southern Hemisphere countries. India is expecting another record crop.

World cotton use, forecast at nearly 87 million bales, is up 1 percent in 1993/94, about one-half the growth rate of the past decade. Larger consumption is mainly evident in a few major exporting countries such as Pakistan, India and the United States. However, use in major importing countries, primarily in Europe and the Far East, is down 2 percent this season. Global trade is projected at about 26.5 million bales, moderately above 1992/93. This season's ending stocks are placed at 34 million bales, down nearly 5 million from the beginning level and equal to 39 percent of use, which matches the 5-year average.

The U.S. cotton outlook for 1993/94 features a close balance between production and total use, and stocks near the congressionally targeted 30 percent of use. The crop is forecast at 16.3 million bales, less than 1 percent above 1992 as 18-percent larger harvested acreage slightly more than offsets 15-percent lower yields. Use is expected to total 16.2 million bales, up 5 percent from last season. While exports are projected to increase 13 percent to 5.9 million bales as they recover somewhat from last season's depressed level, mill use is placed at 10.3 million bales, slightly above last season's 42-year high. Ending stocks are forecast at 4.9 million bales, 5 percent above the beginning level, and equal to the targeted 30 percent of use.

An early look at 1994/95 indicates that production at close to the current level would balance anticipated demand and achieve the 30 percent stocks-to-use ratio target in the current farm bill. To encourage this level of production, a preliminary 17.5 percent Acreage Reduction Program (ARP) for upland cotton was announced November 1. This compares with the 7.5 percent ARP in effect for the 1993 crop. A final ARP decision will be announced by the end of December, taking into account any changes in supply and demand which have occurred since October.

U.S. cotton exports may increase a little in 1994/95 but growth will be tempered by static world trade and continuing strong foreign competition. Although global use is expected to rise further next season to a record level, most of the increase

likely will be in major producing countries, continuing the trend of recent years. Thus, world trade may grow only 1-2 percent to 27 million bales. Assuming the U.S. export share falls within the 20-25 percent range of the past three seasons, U.S. exports could total 5.5 to 7.0 million bales, compared with the 1993/94 forecast of 5.9 million.

Sugar

World sugar production in 1993/94 is expected to fall short of consumption for the second straight year. The relatively tight supply situation should keep world prices within a 10 to 12 cents per pound band for several months. If prices advance much above 12 cents, consumption in some developing countries could drop off.

World sugar production is likely to expand less than one-half of a percent in 1993/94. Production declines in China, the United States, South Africa and the European Community moderate the growth in world output. Input shortages and equipment breakdowns will limit production in Cuba, Ukraine, and Russia.

World sugar consumption is forecast to increase less than 1 percent in 1993/94, mostly because of continued unfavorable economic conditions in the FSU and other countries in Eastern Europe.

U.S. sugar production is expected to be down 5 percent from last year's record because of lower beet sugar output. Sugar beet production is forecast 8 percent lower, and sugar recovery from beets will be down.

Lower production and imports, along with increased domestic use and more shipments of reexport sugar, bring projected ending stocks to their lowest level in decades. If these forecasts materialize, the domestic raw cane sugar price next summer could be more than 2 cents above the current price. In response to this possibility, U.S. sweetener users have asked the Secretary of Agriculture to increase the tariff-rate quota for sugar.

During the past 2 years, U.S. consumption of high fructose corn syrup (HFCS), has increased at about the same pace as sugar consumption. In 1992/93 domestic HFCS consumption accounted for 44 percent of U.S. combined sugar and HFCS consumption.

Livestock and Poultry

World animal product output likely will increase a little over 2 percent in 1994, following an expected rise of 1.5 percent this year and an increase of 1.7 percent in 1992. Red meat production will be up nearly 1 percent this year, and a 1 to 2 percent

increase is expected next year. Pork output is expected to expand 2 to 3 percent in 1994, while beef production holds near the anticipated 1993 level. Poultry meat production continues to expand. World output is projected to increase nearly 4 percent in 1994, about the same increase as anticipated for this year, but below the 6 percent rise in 1992.

Total U.S. meat production in 1994 will increase around 3 percent from this year's record large output. Broilers will continue the long run upward trend and pork and beef output will also increase.

The U.S. cattle inventory at 100.9 million head on January 1, 1993, was up 1 percent from the 1992 level. The cow inventory at the beginning of the year was about unchanged from a year earlier. The indicated calf crop for 1993 is up 2 percent. Producers are holding more replacement heifers than a year ago and a modest expansion in the cattle inventory appears to be underway. The January 1, 1994 inventory is expected to be up around 1 percent.

The number of cattle on feed at the beginning of 1993 was up 7 percent from a year earlier. Inventories have remained sharply above the year-earlier level this year despite placements of cattle on feed that have been near 1992's level. The pace of marketings has been slow. On October 1, 1993, the number on feed was up 9 percent from the previous year. Larger calf crops will result in more feeder cattle available for placements in the coming months. This should support larger fed cattle marketings during late 1993 and in 1994. Cow slaughter in 1994 likely will be little changed from the 1993 level.

Average slaughter weights were sharply lower than a year earlier in the first half of 1993 due to weather-related stress. In recent months, slaughter weights have recovered and are now near record high levels. Average weights in the first half of 1994 are expected to be up from the low levels a year earlier. For all of 1994, average weights are expected to be higher and beef production likely will rise 3 to 4 percent. Beef production in 1993 will be little changed from the 1992 level.

Pork production has been lower than expected this year and for the year may be about 2 percent below the year-earlier level. Production is expected to remain below a year earlier through mid-1994. Output in the second half is expected to increase and for all of 1994 a small increase is forecast. In 1993, barrow and gilt prices will average \$3 to \$4 above the 1992 average. These prices have covered most producer's costs this year. In 1994, prices are forecast to average near the 1993 level which should cover cash costs for most producers.

U.S. poultry meat production continues to trend upward. Broiler producers expanded output almost 6 percent in 1992 and increases of around 5 percent are expected for 1993 and 1994. Despite increased production, broiler prices have been higher than a year ago. Strong export demand has helped support broiler prices and continued strong exports in 1994 are again expected to be positive for prices. The 12-city broiler price will average in the mid-50 cents range this year and next year's average is expected to be down only slightly. These prices are expected to result in continued positive returns for producers.

Turkey production will be about unchanged this year as producers faced another year of poor returns. However, returns late in the year will be the best in several years. Cold storage stocks of turkeys have been below the high levels of last year. Turkey supplies for the late 1993 holidays, while down from a year ago, will be plentiful. Hen turkey prices in fourth quarter 1993 are expected to be at their highest level since 1989. For all of 1993, prices are expected to average 2 to 3 cents above the 1992 level. These improved prices likely will result in a small increase in turkey production in 1994. Strong exports in 1993 have helped support turkey prices and this is likely to continue in 1994.

Egg production will increase about 1 percent in 1993 and a similar increase is anticipated in 1994. Egg producers have had favorable returns this year and have held the flock size above the year-earlier level. Despite increased egg output, egg prices have been higher than last year. The Grade A large egg price will average around 73 cents per dozen, about 8 cents above the 1992 average. Prices are expected to decline in 1994 as production increases.

Dairy

Milk production during 1992/93 was up nearly 1 percent from 1991/92. The number of milk cows continued to decline and for all of 1992/93 averaged 1 percent below the year-earlier level. Output per cow was up 1.8 percent from the strong increases of a year earlier. The cow herd is expected to decline again in 1993/94, but gains in output per cow will be more than offsetting and milk production will rise slightly.

(The milk production forecast assumes that BST will be available for use by producers in February 1994, following approval by the Food and Drug Administration on November 5, 1993.)

Commercial use during 1992/93 was up more than 2 percent from a year earlier. The modest recovery in the general economy has helped boost commercial use. Butter sales have been strong but

cheese, fluid milk and nonfat dry milk markets have been weak. In 1993/94, use is expected to rise 1 to 2 percent above the 1992/93 level.

Net removals of surplus products by the Government in 1992/93 totaled about 8.1 billion pounds, milk equivalent, milkfat basis, down from the 1991/92 level. On a skim solids basis, however, removals rose sharply from the previous year and totaled 4.7 billion pounds. Net removals, on a milk fat basis are expected to decline in 1993/94, but on a skim solids basis another increase is likely.

The all-milk price declined in 1992/93 and averaged \$12.75 per cwt, 50 cents below the 1991/92 average. Prices this fall likely will be above the year-earlier level, but for the remainder of the year they likely will be lower. For all of 1993/94 prices are expected to average \$11.60 to \$12.60 per cwt.

U.S. AGRICULTURAL EXPORTS

Fiscal 1994 agricultural exports are forecast to match FY 1993 at \$42.5 billion, slightly above the \$42.3 billion recorded in FY 1992 but still below the record \$43.8 billion in FY 1981. Lower export volumes for wheat, feed grains and oilseeds will partially offset by higher export unit values, particularly for corn and soybeans. Rice and cotton exports will rise in volume and value and exports of high-value products will continue to rise. High-value product sales will increase again aided by increasing global demand, falling trade barriers, tariff reductions in a number of countries, and U.S. export promotion activities. While the dollar is expected to strengthen somewhat in 1994, it will not increase enough to significantly dampen U.S. competitiveness in this growing market.

At nearly \$9 billion, Japan will continue to be our top market for agricultural exports in FY 1994 with beef, feed grains and rice leading the increase. The EC and Canada are leading markets and Mexico is firmly in fourth position. Exports to Mexico are projected at a record \$3.9 billion, up 5 percent from FY 1993.

Forecast at \$24.5 billion, FY 1994 U.S. agricultural imports will match FY 1993. Tobacco imports will be down but most other products will be stable to slightly higher. Cocoa and coffee are likely to show modest gains due to slightly stronger prices.

With total exports and imports expected to be the same as last year, the FY 1994 trade surplus is forecast to remain at \$18 billion.

U.S. FARM INCOME AND FOOD PRICES

Many U.S. farmers are not likely to see the increased level of overall cash income achieved in 1993, when sales of accumulated crop inventories boosted income. But 1994 should prove to be a better year for some farmers who suffered severe losses to floods and drought in 1993. At the national level, the midpoint of the projected range of net cash income in 1994 about matches the \$59 billion forecast for 1993. U.S. consumers again will find record meat supplies, slow inflation and a moderate rise in food prices.

Farm Income

The 1994 outlook is for a fairly strong farm economy. Agricultural output should move up with crop production recovering from 1993's weather-reduced level and animal product output reaching a record high. Export markets will continue to be sluggish but continued strong domestic demand and falling crop stocks will provide support for commodity prices.

Farm marketing receipts will move up in 1994 with larger output and higher crop prices; but with production expenses increasing slightly and Government payments easing, cash farm income is likely to total \$55 to \$62 billion, about matching the 1993 forecast of \$59 billion and, perhaps, surpassing the 1992 record of \$57.7 billion. Cash farm income in 1994 will benefit from some disaster-related payments spilling over from 1993 crops.

Net farm income in 1994 is projected in the range of \$47 to \$54 billion, with the mid-point up some 15 percent from the 1993 forecast of nearly \$44 billion. The expected recovery in crop production and an increase of \$4 to \$5 billion in the value of inventories next year will boost net farm income.

Farm operator household income is likely to move higher in 1994. Many farm operators are highly dependent on off-farm income. The coming year should see continued improvement in the general economy, bringing more jobs and higher incomes.

Food Prices

Retail food prices will increase a moderate 2 percent in 1993. This follows the very low 1.2 percent increase in 1992 when farm output was at a record level and inflation in the economy dropped to 3 percent, holding down the rise in marketing costs.

The outlook for 1994 is for a continued moderate increase in retail food prices of 2 to 4 percent. Crop production is expected to recover from the weather-reduced level of 1993 and

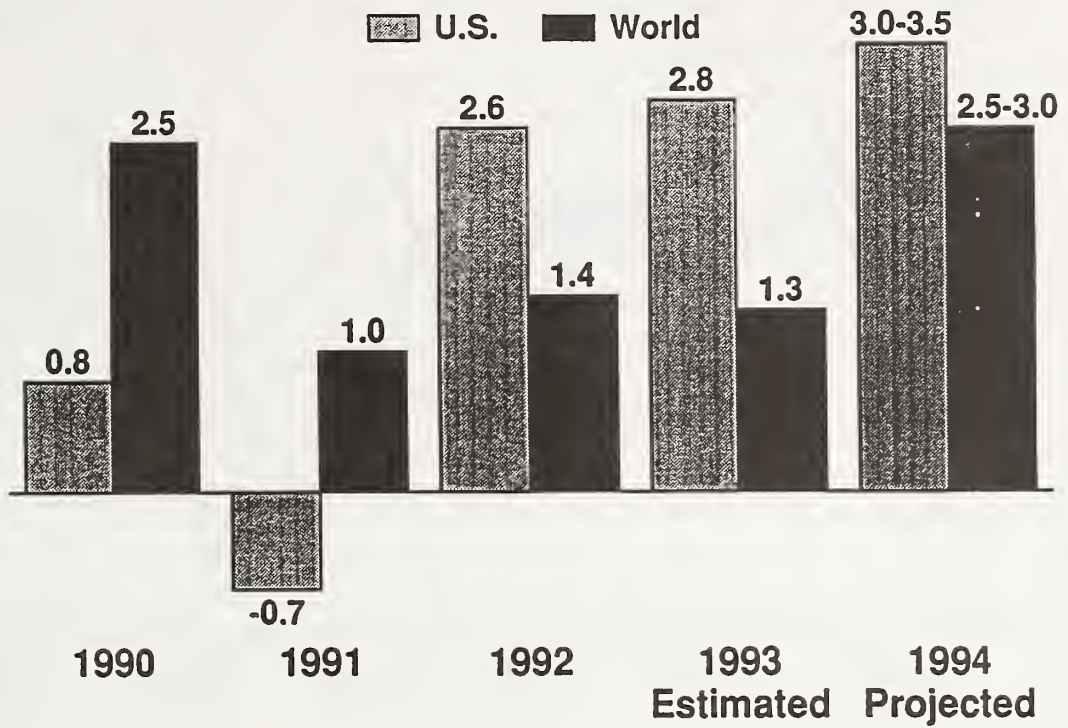
animal product output likely will reach a record level. At the same time, inflation will likely remain at a moderate pace, holding down the rise in marketing costs.

Marketing charges represent by far the biggest component of the retail cost of farm foods, accounting for over two-thirds of the total. Thus, if the United States were to suffer another sharp reduction in crop production in 1994, the effect on food prices would be moderated since the farm value accounts for less than one-third of the retail cost of farm foods. Also, sharply higher feed costs and liquidation of livestock inventories would temporarily increase meat supplies and reduce meat prices, particularly in the first half of 1994. Reduced meat production and higher food prices likely would come in late 1994 and into 1995.

U.S. and World Economic Growth

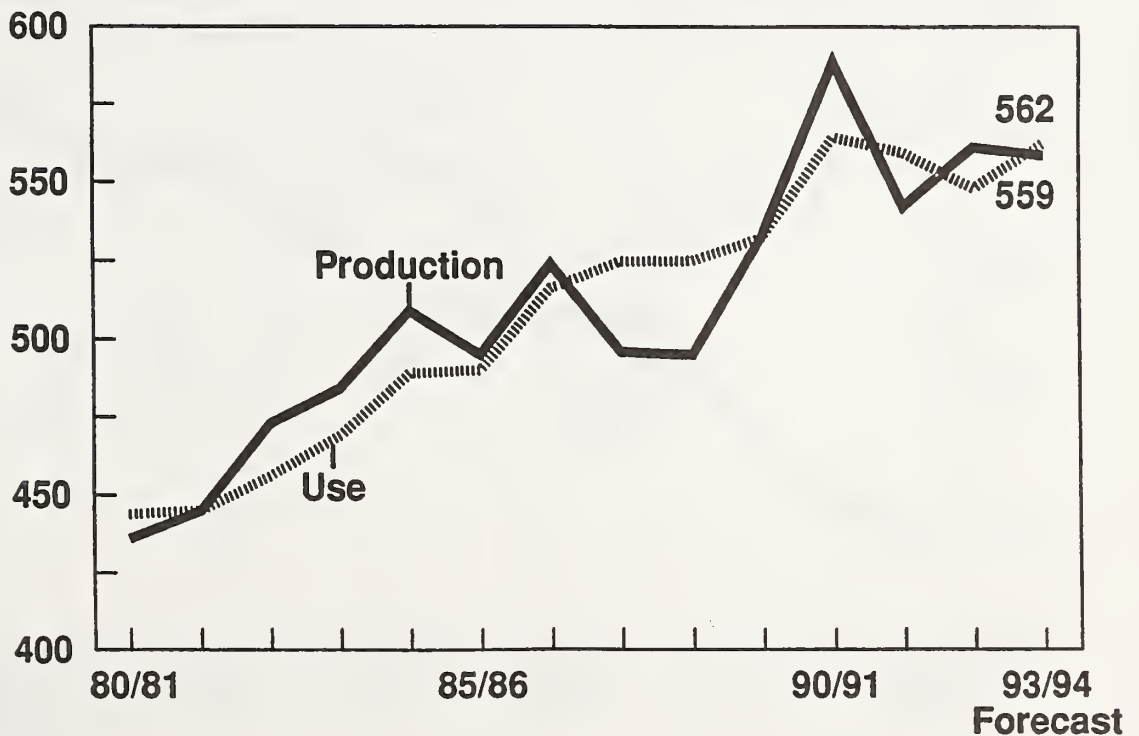
Percent, Real GDP

U.S. World



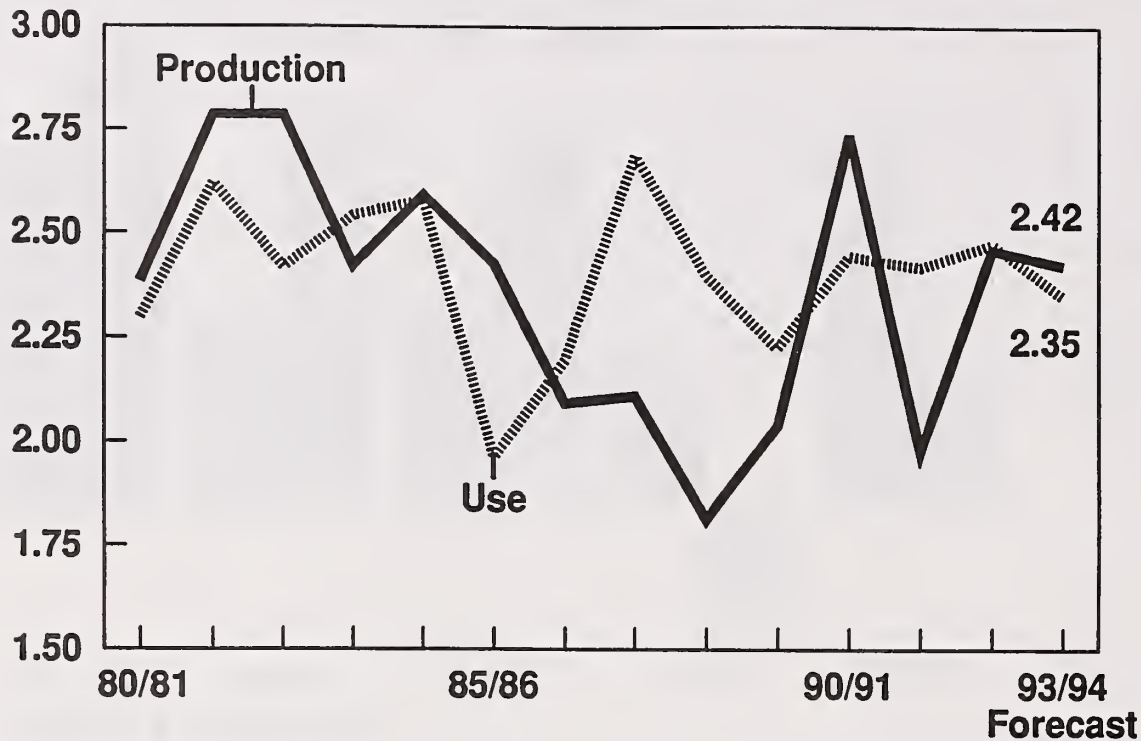
World Wheat

Million Metric Tons



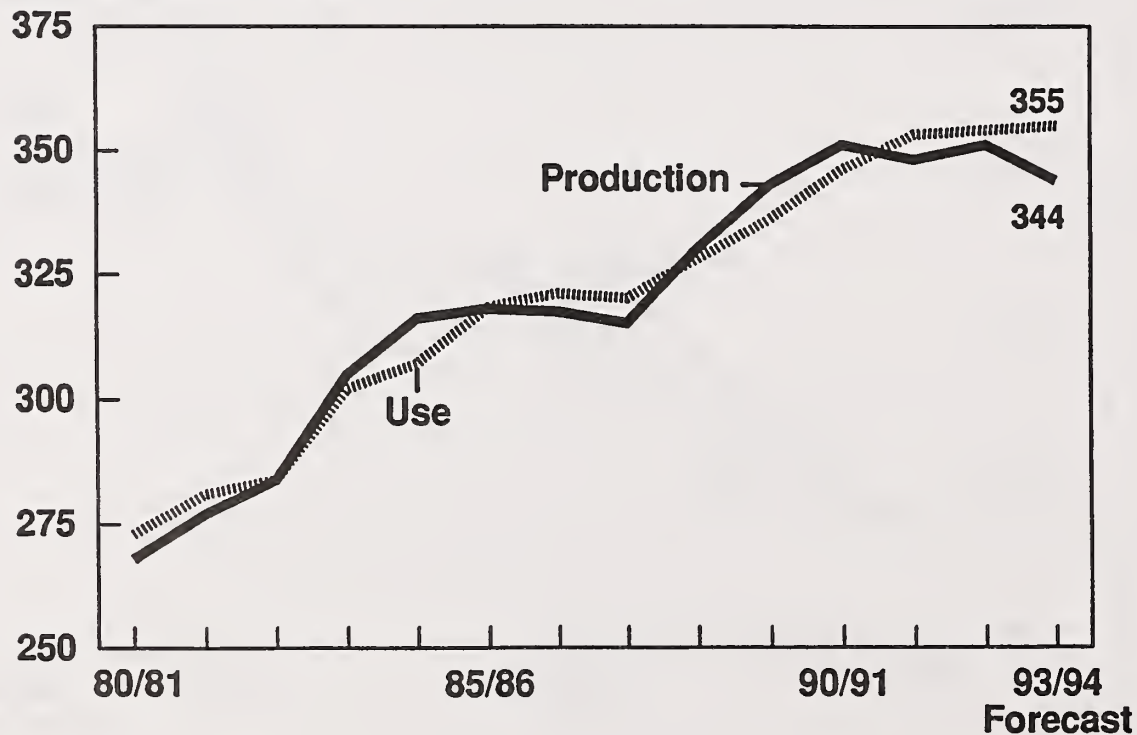
U.S. Wheat

Billion Bushels



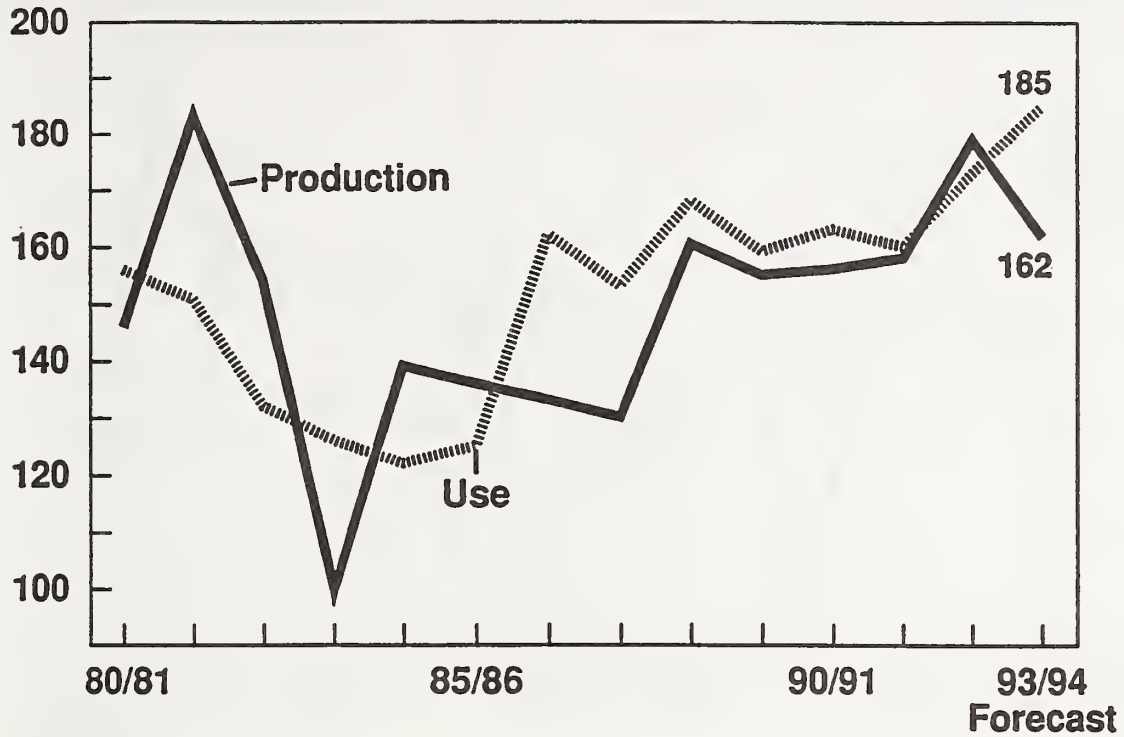
World Rice

Million Metric Tons



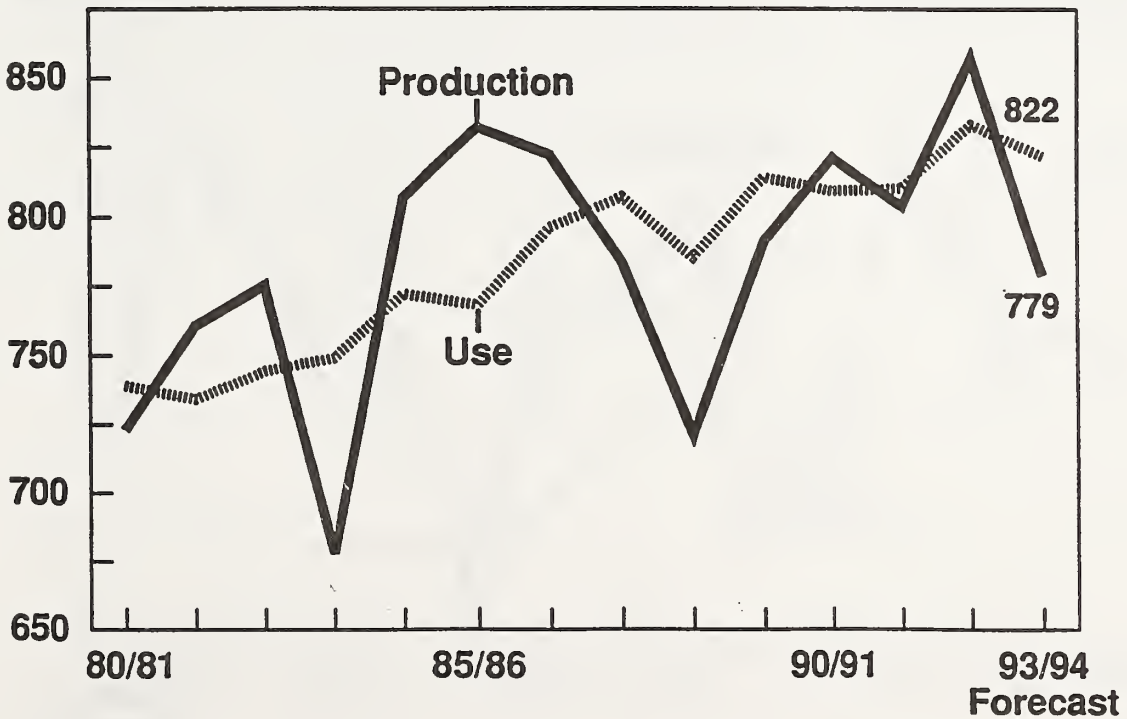
U.S. Rice

Million Hundredweight



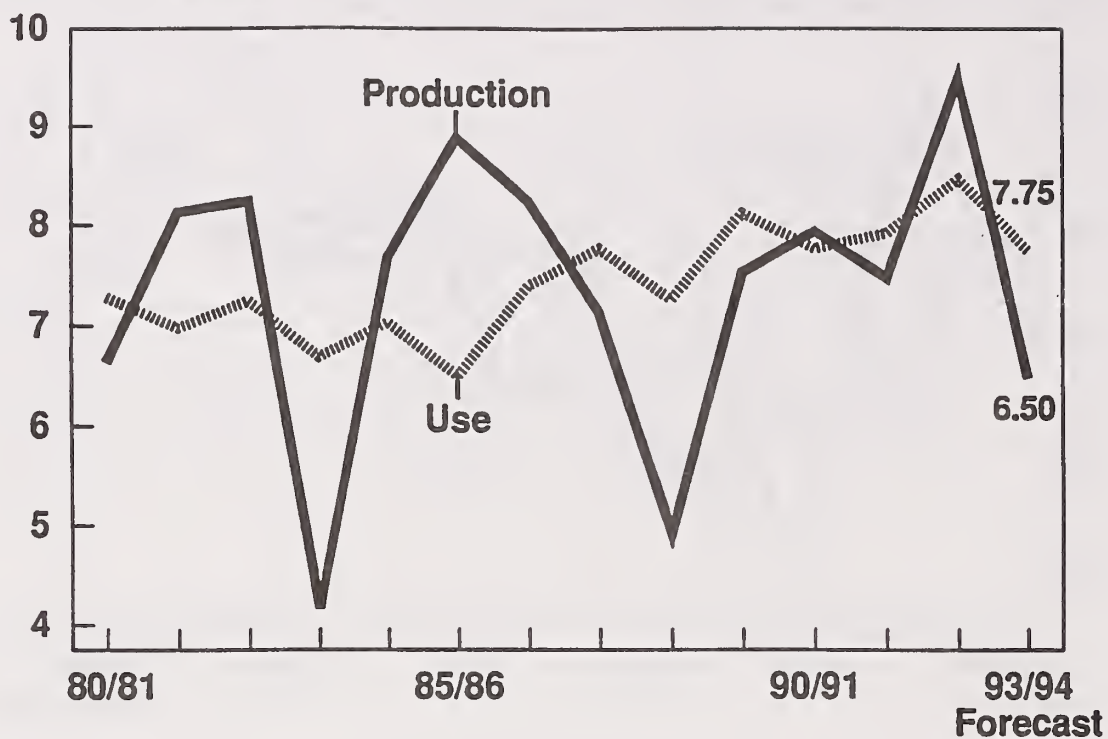
World Coarse Grains

Million Metric Tons



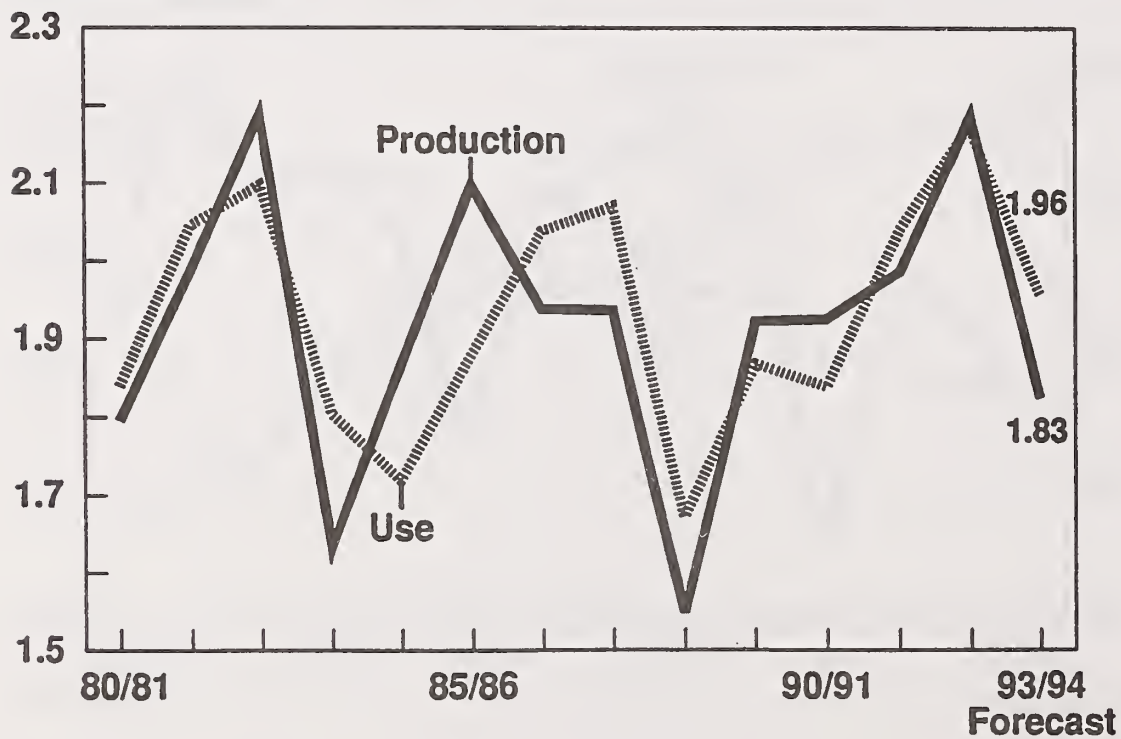
U.S. Corn

Billion Bushels



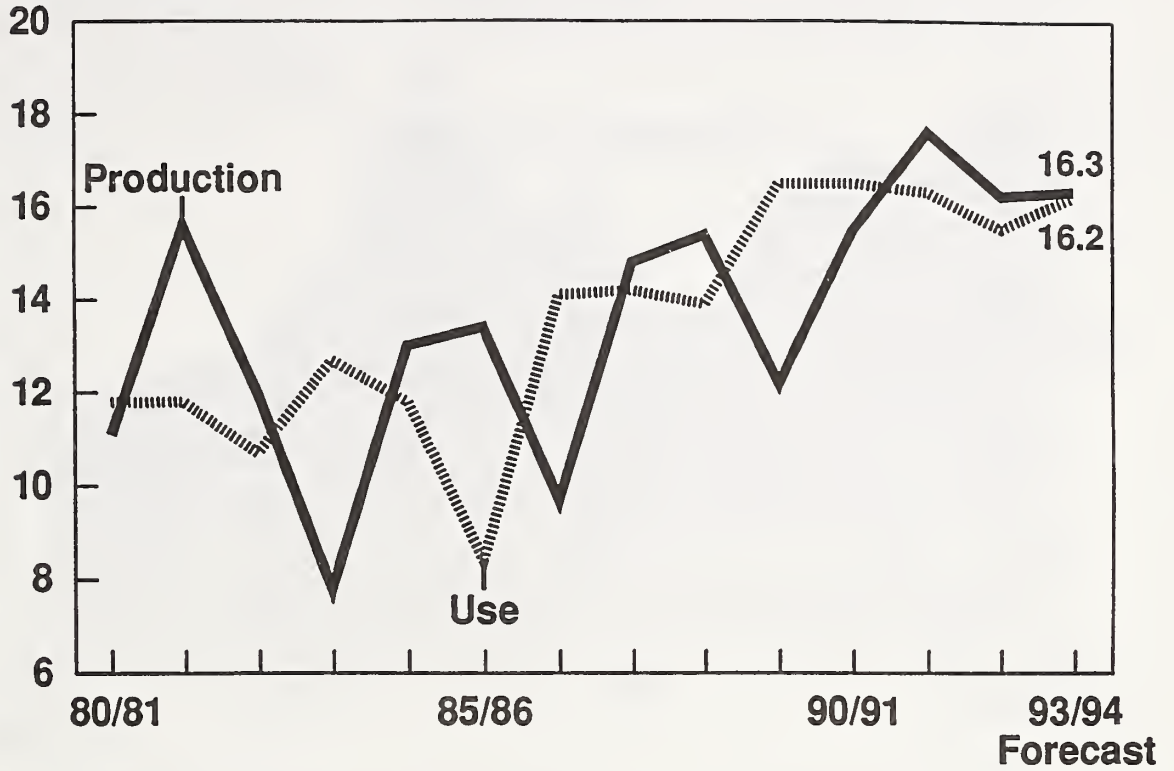
U.S. Soybeans

Billion Bushels



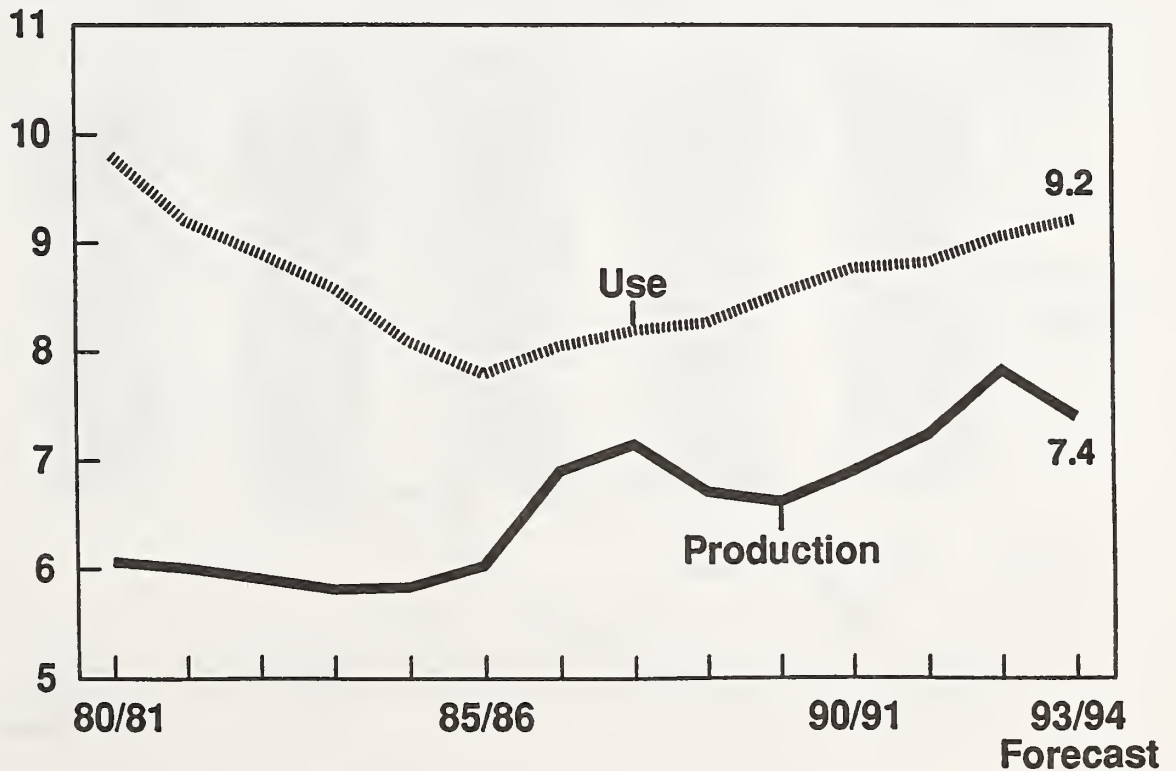
U.S. Cotton

Million Bales

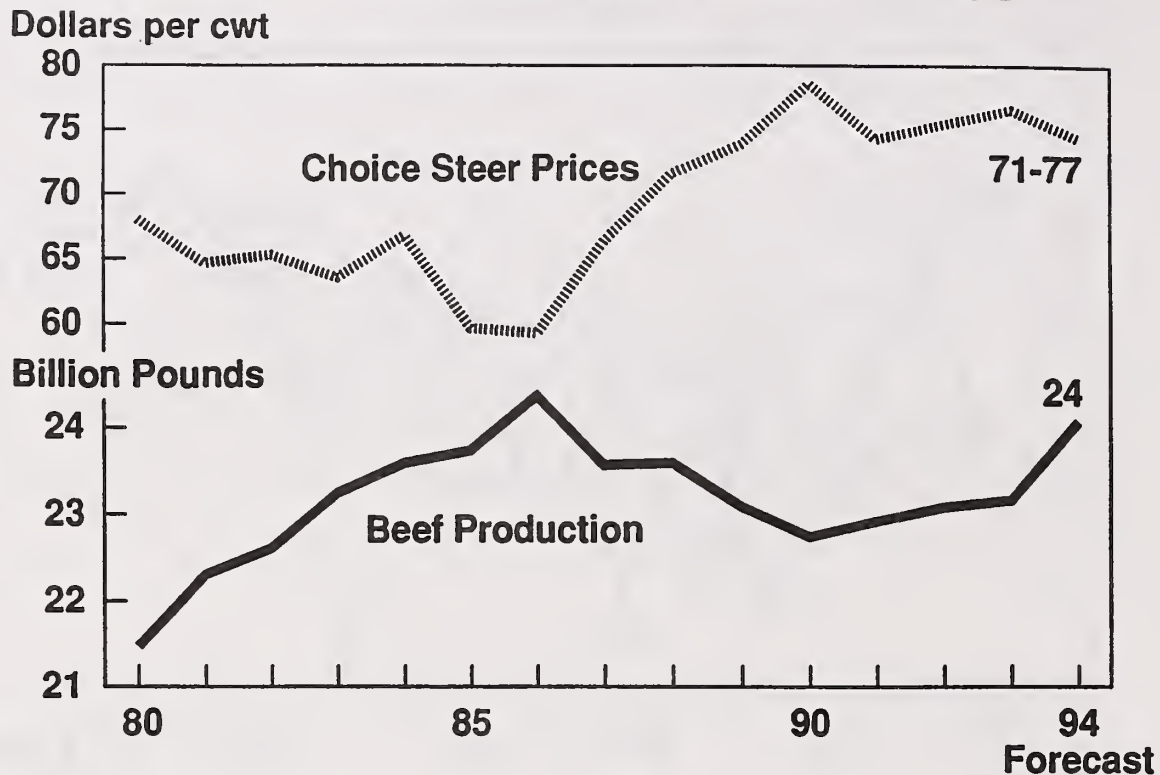


U.S. Sugar

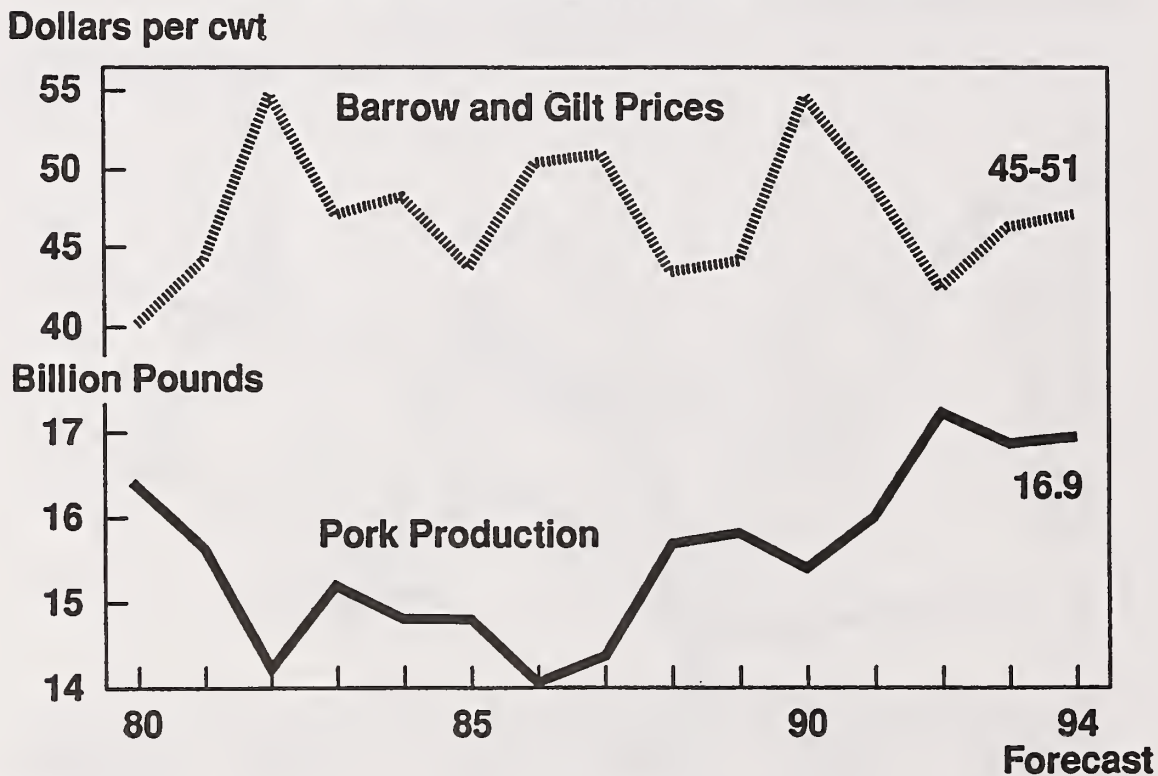
Million Short Tons



Beef Production and Steer Prices



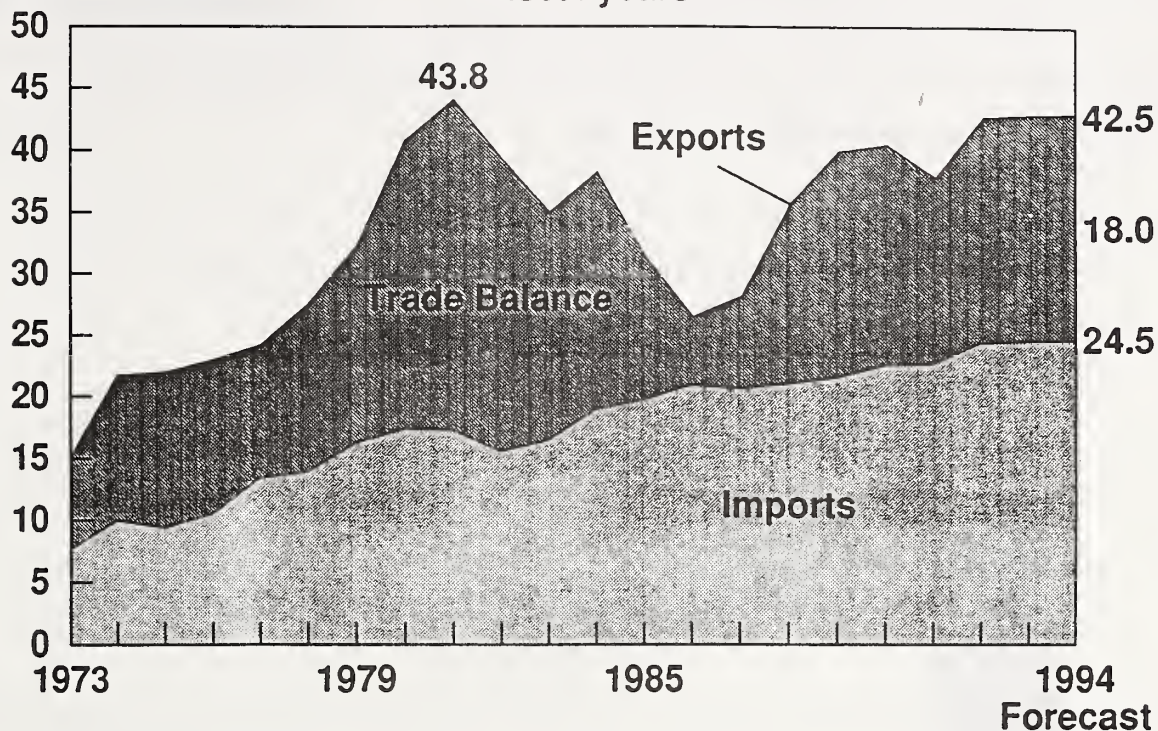
Pork Production and Prices



U.S. Agricultural Trade

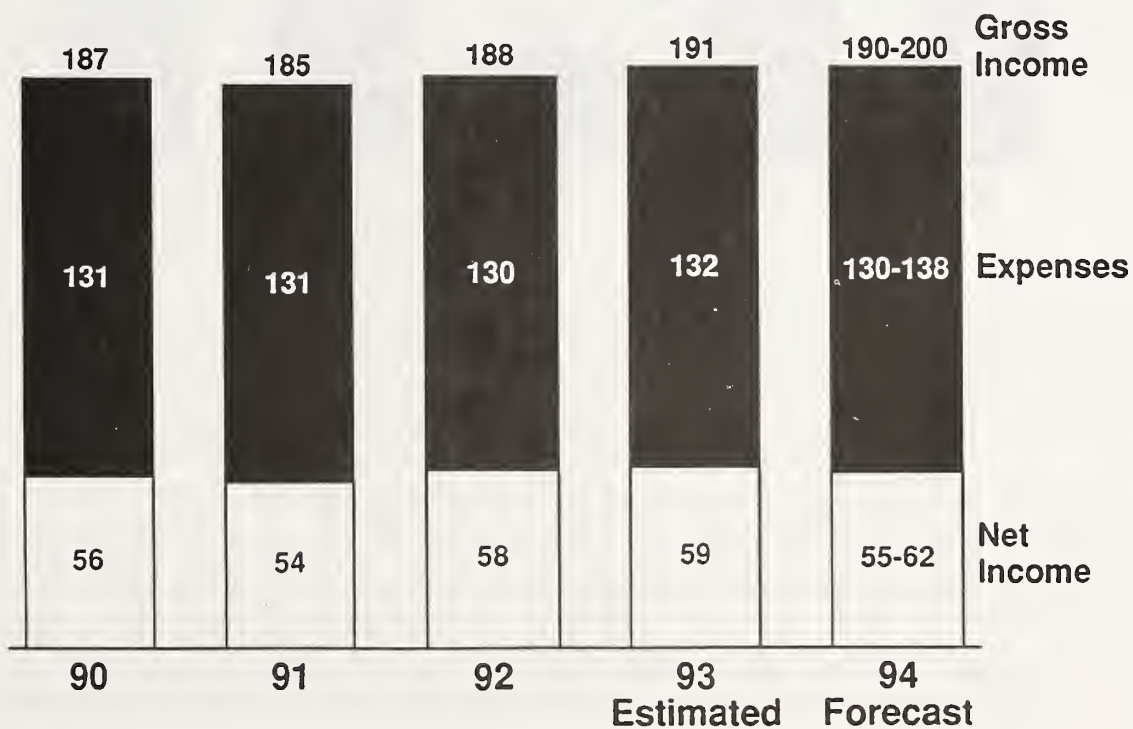
Billion Dollars

Fiscal years



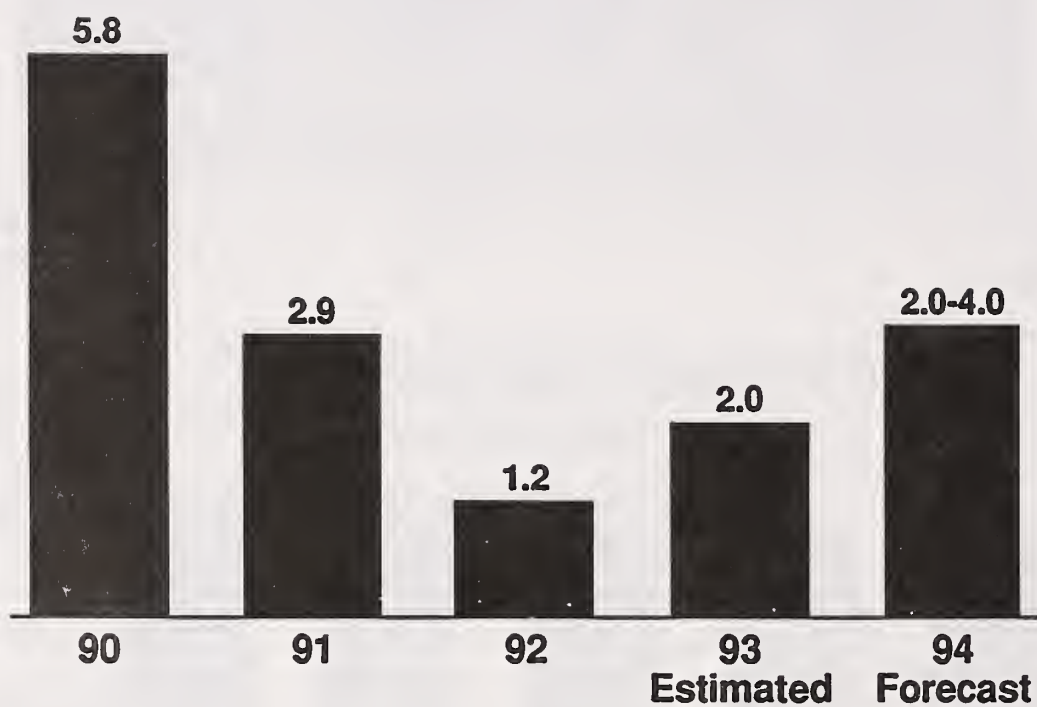
Cash Farm Income

Billion Dollars



Food Prices

Percent Change



Outlook '94

For Release: Wednesday, December 1, 1993

THE PROSPECTS FOR U.S. WHEAT IN 1994**Craig Jagger and Sara Schwartz¹****Agricultural Economists****Agricultural Stabilization and Conservation Service (ASCS)
and Economic Research Service (ERS)****The 1993 U.S. Wheat Balance Sheet:
A Reference Point²**

Halfway through the 1993 U.S. wheat marketing year, how can we characterize the 1993 U.S. wheat balance sheet?

Four Variables, Eight Words.

Relative to 1992, USDA's current estimates for 1993 U.S. supply and use can be summarized by 4 variables and 8 words: **STEADY SUPPLY; LOWER USE; LARGER STOCKS; LOWER PRICES.**³ An elaboration shows that (see Appendix 1 for the full U.S. balance sheet):

¹This paper reflects analysis and insights by our colleagues who contribute to estimates prepared by USDA's Interagency Commodity Estimates Committee (ICEC) for wheat. They are Gerald R. Rector, ICEC chairperson, and Andrew Aaronson of the World Agricultural Outlook Board; Edward Allen and Brian Just of the Economic Research Service; Frank Gomme and Scott Thompson of the Foreign Agricultural Service; and Phil Sronce of the Agricultural Stabilization and Conservation Service. Critiques of and other direct contributions to this paper by Jerry Rector, Ed Allen, Phil Sronce, and Joy Harwood are especially appreciated.

²The labels, "1994", and "the 1994 marketing year" will be used to refer to the U.S. wheat marketing year (June/May) that begins on June 1, 1994 and ends on May 31, 1995. The labels "1994/95" will be reserved for discussions of world marketing or trade years. The "1994/95 world trade year" (July/June) begins on July 1, 1994 and ends on June 30, 1995. The "1994/95 local marketing year" is a composite of U.S. and foreign marketing years rather than a specific 12-month period.

³Sources for estimates discussed in this paper are the November, 1993 issues of USDA's World Agricultural Supply and Demand Estimates, World Grain Situation and Outlook, and World Agricultural Production.

Total U.S. 1993 supply projected steady to up slightly. The 1993 total wheat supply at 3,036 million bushels is projected up by 35 million bushels (0.8 percent) from 1992. Increases in beginning stocks and imports more than offset a relatively small decline in production.

Total U.S. 1993 use projected down more than slightly. Total use of wheat for 1993 at 2,354 million bushels is projected down by 118 million bushels (4.7 percent) from 1992. A substantial projected increase in feed use will not be sufficient to offset sharply lower exports.

U.S. 1993 ending stocks and stocks-to-use ratio projected up significantly. Ending stocks for 1993 at 682 million bushels are projected up by 153 million bushels (29 percent) from 1992's relatively low levels. Almost all of the increase is in "free" stocks--i.e., stocks not under government loan or ownership. The ending stocks-to-use ratio is projected to increase by 7.6 percentage points to 29.0 percent.

U.S. 1993 average prices projected down. The midpoint of the projected 1993 market-year price range of \$2.85 to \$3.10 per bushel is \$2.98--down about \$0.26 (8.0 percent) from 1992's \$3.24 per bushel. Quality problems--especially in the durum and hard red spring wheat crops--have led to substantial premiums and discounts around 1993 base prices.

How can what we know (or believe) at this point in the 1993 marketing year be applied to the outlook for 1994? Let's look at the prospects for U.S. supply, domestic use, and exports separately.

U.S. Supply Prospects for 1994: **Increase Expected Due to Higher Beginning Stocks**

If the current 1993 ending stocks estimate holds and 1994 production and imports are the same as current 1993 estimates, the 1994 wheat supply will be about 3.2 million bushels--about 150 million bushels higher than in 1993. This level would be somewhat above the average level over the last five years--a period which included both very good--as well as--very poor crops. It would also be about half-way between the 1993 supply level and the 1990 supply level, which was the largest level since the 1988 and 1989 droughts.

Given our current knowledge, are these reasonable assumptions to use to project the 1994 wheat supply? The following discussion will argue that the answer is, "Yes."

Changes in 1993 ending stocks can be expected but the direction is unpredictable. Because of the major uncertainties inherently associated with markets affected by domestic and foreign policies, it is rare for forecasts and projections by anyone to be exactly realized. USDA is, obviously, no exception. Changes in ending stocks estimates are especially likely

because changes in either supply or use may change ending stocks. The room for error is higher regarding ending stock estimates because changes in both supply and use can either offset or reinforce one another.

USDA's historical record is mixed. Based on 12-year averages reported in the November, 1993 WASDE, projected U.S. ending stock estimates as of the prior November have differed from realized ending stocks estimates by 10.1 percent or about 100 million bushels. The November estimate has been above the final estimate in 7 years and below it in 5. Because U.S. production occurs in the first months of a marketing year while use occurs throughout, most of the changes have been on the use side rather than supply side. Export changes have averaged 6.7 percent or about 100 million bushels and domestic use changes have averaged 7.6 percent or about 80 million bushels. Production changes have averaged 0.4 percent or about 10 million bushels.

1993 production may be updated. Production estimates have a larger-than-normal likelihood of being updated this year because of the late spring wheat harvest. According to the National Agricultural Statistics Service (NASS), "harvest was far from complete" when what normally are final surveys of small grain production were conducted during the first 2 weeks of September. As of September 14, spring wheat harvest was 34 percentage points behind the average for the major spring wheat states--including 37 points behind in North Dakota and 68 points behind in Montana. Thus, NASS will resurvey producers with unharvested grain and update, if necessary, production estimates in January, 1994. Because NASS includes unharvested grain as stocks in its September 1 "Grain Stocks" report, changes in production may also affect 1993's 1st quarter ending stocks. Implied 1st quarter feed and residual for 1993 wheat will not change as long as any update in production matches any revision in September 1 stocks.

1994 production is expected about the same as 1993 given "normal" conditions. Given few changes in wheat program provisions and realized and expected market conditions at planting times, planted wheat area in 1994 is not expected to change much. Under the assumptions of a similar harvested-to-planted ratio and yield, the 1994 production level would be about the same as 1993. Weather, as always, will be a significant factor in actual wheat production.

Major wheat program provisions largely unchanged for 1994. Major wheat program provisions for 1994 announced as of November 21 (see below) are largely unchanged from 1993. The ARP (acreage reduction program) level for wheat will continue to be 0-percent and the target price will continue to be \$4.00. A change in the formula for calculating the deficiency payment rate is expected to lower deficiency payments below levels that would have occurred without the rate change, however. In addition, provisions of the 0/92 program will change.

Did anyone notice the ARP change last year? In the past, the ARP for wheat has been a major determinant of acreage. An old rule of thumb from before the 1990 farm bill is that total planted wheat acres increase by about 2.5 to 3.0 million acres for a 5-percent reduction in the ARP level. But changes in the 1990 farm bill increased the impact of market returns on producers' planting decisions. Weather continues to be an important factor, too. And despite a reduction in the ARP percentage for wheat from 5 percent in 1992 to 0 percent in 1993--which allowed producers who participate in the wheat program to plant more wheat--acres planted to wheat in 1993 were 0.2 million acres lower than in 1992.

For 1993, additional program acres were idled or planted to other crops. What happened in 1993? Based on preliminary information from ASCS compliance records, some general conclusions can be drawn. Wheat program participation is significantly higher in 1993 than in 1992 and the increase in plantings by wheat program participants roughly offsets declines in planting by non-participants. Acres planted to wheat by program participants were lower than permitted because they idled some additional acres of wheat-base NFA ("normal flex acres"), increased their net plantings of other crops on NFA, and either idled or planted to selected crops significantly more acres under the 0/92 program.⁴ Some of these changes are undoubtedly weather-related but a reconciliation of 1993 wheat acreage and 1992 acreage awaits the pending release of ASCS's 1993 Preliminary Compliance Report.

With similar program provisions, changes in plantings largely determined by non-program variables. Because the 1994 ARP and other program components are largely unchanged from 1993, changes in 1994 plantings from 1993 can be expected to be from changes in absolute and relative returns, weather conditions, and other factors.

⁴Normal flex acres (NFA) are equal to 15 percent of a producer's wheat base. Producers may plant wheat or most other crops on wheat NFA and still be in compliance with the wheat program. Producers do not receive deficiency payments on NFA under any circumstances--i.e., whether they plant wheat or some other crop on NFA. Thus, decisions on what crop, if any, to plant on NFA are based solely on market returns. Optional flex acres (OFA) are equal to 10 percent of a producer's program base. Producers receive wheat deficiency payments if OFA are planted to wheat but not if OFA are planted to other crops. To define the 0/92 program, one must first define "maximum payment acres" (MPA). MPA is the maximum acres of wheat base that may receive deficiency payments. MPA is equal to base acres less ARP-idled acres less NFA. To qualify for the 0/92 program, producers must idle or to plant selected crops (minor oilseeds, sesame, or crambe), 8 percent of their maximum payment acres without receiving the deficiency payments they would receive if they planted these acres to wheat. They then receive 0/92 deficiency payments on all remaining maximum payment acres that are idled or planted to selected crops. 0/92 deficiency payments have a guaranteed rate equal to the deficiency payment rate projected by USDA at program sign-up.

1994 winter wheat crop is largely planted and mostly emerged. Normally about 65 to 75 percent of the total U.S. wheat crop is winter wheat. As of November 14, 1993, 97 percent of the 1994 winter wheat crop was reported planted and 88 percent was reported emerged.

Planting conditions generally better this year. Planting conditions were generally more favorable than a year ago in major winter-wheat production regions. Planting was delayed in some soft-red winter wheat producing states because of excessive moisture and late harvest of 1993 corn and soybeans. Producers in areas who have not finished planting all of the wheat they originally intended may choose to plant corn or soybeans next spring.

Prices or returns roughly similar or higher. In general, wheat prices or returns were roughly similar at planting time to last year. Higher corn, sorghum, and oilseed prices may encourage some switching on wheat flex acres to other crops. While white wheat prices were lower this year than last, the lower prices were because of higher yields and total returns were encouraging.

Early crop conditions are good. Crop conditions as of November 14 indicate that the 1994 winter wheat crop in 19 major producing states was rated 16 percent excellent, 52 percent good, 29 percent fair, 3 percent poor, and 0 percent very poor. For Kansas, typically the largest wheat producing state, the crop is rated 44 percent excellent, 44 percent good, and 14 percent fair.

Mid-November conditions are unreliable indicators of yields. Calculating a summary index number by assigning values of 5 for excellent through 0 for very poor gives a rating of U.S. rating of 3.81--0.20 points above last year and second only to 1987 for the 1987 through 1993 crops as of a comparable date. The Kansas index at 4.28 is the highest for any state for 1993 and is higher for Kansas than for any of the 1987 through 1993 crops. However, the correlation between mid-November crop conditions and realized yields for both the U.S. and Kansas is practically zero. Thus, while good conditions in mid-November are preferable to poor conditions, a lot can happen between now and harvest. Assuming an average or trend yield for 1994 winter wheat would not be unreasonable and would give a yield similar to 1993.

Market conditions next spring will affect 1994 spring wheat plantings. Spring wheat producers are able to respond to late-breaking market conditions that occur after the winter wheat crop is planted. Since the winter wheat crop was planted, estimates of the U.S. corn and soybean crops have been reduced sharply, thereby boosting prices. Durum and high-protein wheats are selling with historically high price premiums. Spring wheats in the upper Great Plains experienced many disease

problems but 1993 average yields, while well below last year's records, were similar to longer-run averages.

1994 imports will depend on a variety of market and policy factors. Because imports of wheat grain, flour, and products historically have been small relative to other supply components, they would have to change significantly from their projected 1993 record level of 85 million bushels to have much impact on the 1994 all-wheat supply.⁵ This 1993 level, if realized, would represent a 15-million bushel (21 percent) increase from 1992 and would mean that wheat imports have increased for six consecutive years.

Increase largely in grain imports for milling or feed. For 1993, about 85 percent of projected U.S. wheat imports are projected to be grain with the remaining 15 percent projected to be flour or wheat products. The grain portion of total wheat imports has increased much more rapidly than the flour and products portion in recent years. This partly reflects recent imports of wheat grain for feed use. Feed wheat imports are the result of many factors which include quality problems with Canada's 1992 and 1993 wheat crops as well as reduced feed grain supplies in the U.S.

U.S. is concerned over import increase. Because almost all U.S. grain imports are from Canada, Government policies and market conditions on both sides of the border will have a major impact on 1994 U.S. wheat imports. The continued increase in wheat imports and accompanying impacts on U.S. markets and programs have become an increasing concern in the U.S. Possible responses--including the imposition of import quotas under Section 22 of the Agricultural Act of 1933--are being explored. Secretary Espy has indicated that negotiations with Canada will precede any U.S. action.

Policy change not assumed in USDA projections. USDA's import projections do not reflect potential policy changes than could occur. It is a long-standing USDA policy that published estimates only incorporate the impacts of possible major policy actions after the policy decisions and announcements are made.

U.S. Domestic Use Prospects for 1994: **Increase Expected Largely Due to Higher Feed and Residual Use**

A significant increase in wheat feeding next summer (i.e., June through August, 1994), combined with a modest increase in food use and little change in seed use, is expected to cause an increase in total domestic use in 1994. Unless exports increase significantly,

⁵While projected imports constitute slightly less than 3 percent of 1993's total projected wheat supply, they are 22 percent of the projected durum supply, 6 percent of the projected hard red spring supply, and 2 percent of the projected white wheat supply.

domestic use will be higher than exports for the second year in a row. Domestic use larger than exports occurs infrequently and is usually associated with years when feed and residual use is relatively high.

Modest increase expected in 1994 food use. Projected 1993 food use at 835 million bushels is projected to be another record high--albeit by only 5 million bushels. If this level is realized, 1993 would be the 16th consecutive year that wheat food use has set a new record. And, over the last 10 years, wheat food use has increased by roughly 200 million bushels. Given this trend, one can feel reasonably safe projecting a modest increase in food use for 1994.

Change, if any, in 1994 seed use likely small. Projected 1993 seed use at 94 million bushels is roughly 4 percent of total projected use. Relative to other use components, seed use does not change much; over the last 10 years it has varied by only 19 million bushels--reflecting a range in planted acres of 13.7 million acres. Obviously, seed use in 1994 will depend on acres planted to the 1995 crop but unless acreage changes are large, changes in seed use will be small.

1994 first quarter feed and residual use projected up significantly. USDA's current projection of the 1994 first-quarter feed and residual use is 400 million bushels.⁶ This would be approximately 100 million bushel above the 1993 first-quarter feed and residual use.

Tight corn supplies and poor quality. The higher 1994 estimate reflects tight corn supplies. Expected feed use in 1993 and, to some extent, in 1994 also reflects the poor quality wheat caused by excessive moisture and accompanying disease damage in some regions of the U.S.--particularly in the Hard Red Spring wheat areas of the northern plains. Part of U.S. wheat imports this year are expected to be of wheat that is graded as feed wheat in Canada. Some of this Canadian wheat will actually be fed but some will likely be milled.

Typically, most actual feeding in first quarter. Typically, most actual wheat feeding occurs during the first quarter of a wheat marketing year. The June-August first quarter of the wheat marketing year is also the fourth quarter of the prior-year corn marketing year--reflecting the differences in harvesting and marketing periods of the 2 crops. Typically during this quarter, wheat supplies are the most abundant

⁶The feed and residual use category includes actual feed use plus any residual disappearance of total wheat supplies implied by the ending stocks estimate that cannot be explained by other use categories. The feed use and residual components cannot be partitioned because there is no separate feed use data source. The estimate of 1994 first quarter feed and residual use can be derived by combining projections published in the November, 1993 WASDE regarding wheat feed and residual use during the September, 1993 through August, 1994 period (p. 25) and wheat feed and residual use during the June, 1993 through May, 1994 period (p. 6) with an unpublished calculated estimate of wheat feed and residual use during the June, 1993 through August, 1993 period.

because new-crop wheat production is available, while corn supplies are the most scarce because new-crop corn has not yet been harvested. Thus, the wheat-corn price spread is typically at a seasonal low which makes actual wheat feeding most attractive. Also, producers typically do not want to store low-quality wheat--especially if they have to pay for off-farm storage.

First quarter use typically higher than annual. In five out of the last six marketing years (1987 through 1992), first quarter feed and residual use has been more than 100 percent of annual feed and residual use. For these five years, the first-quarter estimate averaged 158 percent of the marketing-year estimate. The lone exception for the period was 1990 when actual feeding during later quarters was well documented. Feed and residual use in 1994 for the second through fourth quarters will depend on 1994 feed grain production as well as the quality of the 1994 wheat crop and imports.

Feed and residual use hard to peg. Total feed and residual use is notoriously hard to peg. As the end of a marketing year approaches, estimates for most use categories typically narrow in on final estimates. Because of the nature of feed and residual use, major changes are often made when USDA's final, end-of-market-year stocks estimates are published.

World Prospects Affect U.S. Export Prospects

The web of factors that influence world trade and U.S. exports are varied and depend on market and policy factors both here and abroad. As the largest exporter of wheat in the world, the U.S. exports wheat to more than 90 countries--ranging from Algeria to Zaire and from China to the Leeward/Windward Islands. To better understand factors affecting U.S. exports for 1994/95, an examination of selected conditions in world markets and major importing and exporting countries is helpful. But first let's establish world reference points for 1993/94.

The 1993/94 World wheat balance sheet.

Four variables, eight words. Relative to 1992/93, USDA's current estimates for 1993/94 world supply and use can also be summarized by 4 variables and 8 words: **LARGER SUPPLY; LARGER USE, LOWER STOCKS, LOWER TRADE.** An elaboration shows that (see Appendix 2 for the full world balance sheet):

Total 1993/94 world supply projected up moderately. The 1993/94 world wheat supply at 700.7 million metric tons (MMT) is projected up by 11.4 MMT (1.6 percent) from 1992/93. Increases in beginning stocks are responsible for the entire increase. World production is expected to show a very small decline.

Total 1993/94 world use projected up a little more than supply. Total 1993/94 use of wheat worldwide at 561.5 MMT is projected up 13.5 MMT (2.5 percent) from 1992/93--slightly more than the supply increase. About half of the projected increase is in feed use.

World 1993/94 ending stocks and ending stocks-to-use ratio projected down moderately. World ending stocks for 1993/94 at 139.1 MMT are projected down by 2.2 MMT (1.6 percent) from 1992/93. Modest declines in foreign ending stocks--especially in the FSU and the EC, will more than offset the increase in U.S. stocks. The projected ending stocks-to-use ratio at 24.8 percent is down about 1 percentage point from 1992/93.

1993/94 world trade projected down. World trade is projected down by 10 MMT (9.1 percent). FSU, East European and South Asian countries show the largest absolute declines but continued low imports by China relative to historical levels is also a major factor. Supplies available for export are abundant around the world.

What in the world will happen in 1994/95?

While USDA will not make forecasts of 1994/95 world supply and use until May 11, 1994, it is not too early to discuss influences on--and selected components of--the 1994/95 world balance sheet. The following discussion targets key importing and exporting countries and largely addresses two topics: (1) economic conditions affecting producers and consumers and (2) production prospects. A few general comments regarding these topics are:

Economic environments to change in key importing and exporting countries. Producers in the EC are continuing to adjust to changes resulting from CAP (Common Agricultural Policy) reform. In addition, political and economic changes are occurring in the former Soviet Union (FSU) and China. Mexico and some other developing countries are continuing moves towards market liberalization.

Various factors suggest 1994/95 world production may not change much. While area planted to wheat in individual countries is likely to rise or fall based on policies, prices, and weather, total foreign area for 1994/95 is expected to be about the same as, or slightly lower than, this year. This would be consistent with the continued decline in foreign area that has occurred since 1980/81. Foreign yield growth of about 1 percent for 1994/95 would be suggested by the trend since 1980/81. Previous growth in foreign yields has slowed in recent years. Taken together, these area and yield projections would suggest that foreign production may not change much. The combination of this foreign production outlook and the U.S. production outlook would suggest that 1994/95 world production may not change much. However, as always, weather, more than any other factor, will be the major determinant of 1994/95 production.

Some information on 1994/95 winter wheat area available. Beyond changes in economic conditions and trend analysis, information on winter wheat area and conditions in key foreign countries is available and is discussed below. In the Northern Hemisphere, most of the 1994/95 winter wheat crop has already been planted. It will be several more months before Southern Hemisphere winter wheat and Northern Hemisphere spring wheat crops will be planted.

Major world wheat importers and others in 1994/95.

Russia and other countries of the former Soviet Union (FSU) and China are the world's largest wheat producers and, historically, the world's largest wheat importers. These countries and others are experiencing a myriad of changes.

Russia/FSU: Russian production/marketing system changing. Recent government decrees are likely to further change the grain marketing system in Russia. The decrees will have major impacts on producers, processors, and consumers.

Government procurements expected lower. Government procurements of the Russian wheat crop are expected to be reduced next year. While, historically, the government bought nearly all the wheat marketed off-farm and distributed it to processors and millers, the government's share has dropped in recent years. The central and regional governments of Russia will continue to buy a substantial portion of the crop, however.

Lower state procurement means that millers and processors will have to find alternative sources for much of the wheat they need. Lower procurement will also complicate marketing for producers who will have to find alternative buyers. Price volatility and uncertainty will likely increase.

Miller and consumer subsidies to be lowered or removed. The Government has announced that flour and feed mills will no longer receive input subsidies in 1994/95. Flour mills will have to pay higher prices for grain. They can be expected to pass along the price increases to consumers. In addition, consumer subsidies will be limited. Reduced bread subsidies and higher prices are likely to lead to a further reduction in consumption--a trend already underway for some time. Moves to decontrol bread prices are reducing the feeding of bread to livestock and will mean reduced losses due to waste. As reductions in livestock continue, feed use of wheat can be expected to decline.

Producers facing lower subsidies, other major adjustments. Beyond the marketing problems, increased price volatility and uncertainty discussed above, producer subsidies in Russia are expected to drop in 1994/95. Producers are also expected to face increasing problems in accessing farm equipment and other production inputs.

These problems will compound those currently faced by producers in 1993/94. While the Government has been procuring more grain than in 1992/93 by offering relatively higher prices, procurement agencies are having difficulty finding funds to pay producers and are now in debt to producers. But producers who want to sell grain have few alternatives to State procurement and on-farm stocks are likely already high. Producers will continue to seek alternative ties with processors and millers. In recent months, prices on the new grain exchanges have been well below the government's procurement price. Despite these problems, the number of private farms is expanding and many are choosing to grow wheat because it is a familiar crop and because wheat prices are high relative to those of other crops.

Long-term prospects point to increased efficiency. Efficiency of the production and distribution system can be expected to increase over time. Privatization of farms and processing facilities and an end to "soft" credit should reduce waste. Frequent policy changes hinder long-term planning, however. Adding the unpredictability of policy to the major disruptions of the longstanding production and distribution systems, makes predicting short-term outcomes virtually impossible.

Russia's 1994/95 winter crop area expected lower; Ukraine's slightly higher. Winter crop planting in Russia is expected to fall somewhat from last year's low level. The best time to plant winter wheat in the FSU is September. Planting of the 1994/95 winter wheat crop in Russia was interrupted because of cold, wet weather. Because the harvest of spring crops was delayed even more than last year, less time was left for winter grain planting.

In Russia as of October 11, winter grain seedings were 3 million hectares (20 percent) less than 1992 fall seedings and 6 million hectares less than 1991. In Ukraine as of November 3, winter grain seedings were up slightly from last year, despite reported shortages of fuel and other inputs. Continued dryness in southern Ukraine and the north Caucasus region of Russia has likely hindered germination and establishment of the wheat crop prior to dormancy. Winter wheat typically is more than 60 percent of Russia's total wheat crop.

Will problems that have limited Russian imports in 1993/94 continue? Imports by FSU countries from third countries are forecast to fall sharply in 1993/94. While Russia has purchased wheat from the United States under the P.L. 480 program and Uzbekistan has made use of EEP program guarantees under barter arrangements and GSM credits, few other sales have occurred. USDA's Commodity Credit Corporation (CCC) has recently purchased wheat for donation to Russia and Georgia. Some EC deliveries have been made based on programs and sales arranged during 1992/93.

While the FSU recently made progress in paying off its debts to the United States, the EC, and Canada, no new credit or aid packages have been announced. Even if more

aid is made available, it appears that feed grains and protein meals will be of higher priority for many FSU countries. And, since the FSU has not been able to take advantage of the EEP price discounts when it purchased wheat under the P.L. 480 program, it is likely to turn to other grains if another similar aid package is offered.

China: Policy uncertainty, production pressures increase. In China, producers continue to face a combination of policy uncertainty and pressure from the government to continue producing wheat.

Storage policy unclear. In 1993/94, China aided by record yields, produced a record wheat crop. Government subsidies for stocks to provincial grain bureaus were reduced, however, thereby reducing incentives to hold stocks and reducing the need for imports. Further evidence from 1993/94 of changes in China's stockholding pattern is provided by its exports of low-quality wheat for feed to South Korea.

However, recent government announcements suggest that the State Grain Reserve Bureau is building storage space to increase carrying capacity to 161 million tons. Because increased storage is generally considered to reduce price volatility and accompanying price spikes and valleys, storage policies have important potential impacts on incentive prices to producers. The Government recently indicated that it will increase the state purchase price for grain and will set up grain risk funds that will buy and sell supplies to reduce price fluctuations.

Import methods appear to be changing. China's method of importing wheat also appears to be changing. The central government's importing agency, CEROIL, appears to be importing wheat on behalf of provincial buyers instead of by direction from the central government. Thus, provincial buyers appear to be the major sources of CEROIL's foreign exchange. This would limit CEROIL's access to funding. The pace of imports, therefore, could remain slow in 1993/94. It is uncertain as to how long it will take processors to adjust to new market conditions.

Price and policy impacts unclear. Little information is available regarding the price impact and supply and use implications of policy changes. Thus, possible impacts on wheat production are difficult to forecast. It is known, however, that wheat prices after the 1993 harvest were up about 2 percent compared with last year, that domestic demand for good quality wheat appears to be rising, and that the government is still trying to encourage farmers to grow food grain crops.

China's 1994/95 wheat area expected similar to 1993/94. It is likely that China's wheat area for 1994/95 will be similar to 1993/94 because of favorable planting conditions and continued government support for the crop. Temperature and moisture conditions were generally favorable for planting and germination of the winter wheat crop.

North Africa: Rains return for some. In North Africa, wheat is planted between mid-November and early January. The crop depends on good rainfall at planting and adequate moisture through May.

Morocco, Egypt: conditions favorable. After 2 consecutive years of drought, Morocco received abundant rain in October, giving producers ample opportunity to begin planting. In Egypt, wheat is irrigated and strong support prices for wheat are likely to lead to its continued area expansion.

Algeria, Tunisia: rains needed. in Algeria and Tunisia, more rain is needed to begin planting.

Eastern Europe: Weather and prices bring mixed results. Weather conditions in most of Eastern Europe were more favorable than a year earlier for winter wheat planting while prices were higher in some countries and lower in others.

Hungary, Slovak/Czech Republics: area likely up. Wheat area is likely to expand in some countries that experienced drought in 1993/94, including Hungary and the Czech and Slovak Republics, where recent rains helped winter crops. In those countries, wheat prices are up, which increased its attractiveness to producers.

Bulgaria, Poland: area likely down. Since land reform issues in Bulgaria are still not settled, some decline in winter wheat plantings is possible. Dryness there likely hampered planting as well. In Poland, wheat prices were low relative to a year ago and area is likely to fall.

Romania: land reform, weather offset. In Romania, the land reform process is more advanced, and the uncertainty surrounding ownership is lessening. This has led to some optimism regarding increased winter grain planting this autumn. However, the dry conditions may have constrained planting in some regions.

Mexico: Policy changes may increase wheat area. In October, the Mexican government announced changes in its agricultural policy that are likely to lead to increased wheat area.

Corn price support reduced; shift to wheat expected. The most important change in Mexican ag policy is a reduction in support prices for corn. The reductions in support will occur rapidly during a short transition period. The main impact is likely to be reduced corn plantings and more wheat plantings, particularly in those irrigated areas where corn has been planted on traditional wheat land in recent years.

Both wheat area and yield could increase in 1994/95. Wheat is planted between December and the end of January, so farmers are likely to begin shifting area in 1994/95. With near to above normal reservoir levels and, assuming normal weather,

yields could also expand because the area most likely to shift from corn to wheat is among the most fertile irrigated land.

India: moisture, prices, policies to maintain high area. Adequate moisture conditions, higher prices, and improved market conditions are likely to keep wheat area high in India.

Planting conditions good. Planting conditions were favorable in India where irrigation supplies are adequate following a good monsoon season.

Procurement prices up. Wheat procurement prices for the 1994 crop were raised 8 percent, although fertilizer prices are also expected to rise. In addition, the government is beginning to allow freer movement of grain within the country by relaxing restrictions on private traders, allowing them to transport wheat from state to state more easily.

Non-EC Western Europe: Agriculture supports declining. Policy changes in non-EC West European countries are leading to reduced support for agriculture, including wheat. Most of these countries, including Austria and the Scandinavian countries, support agriculture at even higher rates than the EC. To prepare to join the EC, they are reducing support. As a result, area is likely to remain similar to that of 1993/94.

Major world wheat exporters in 1994/95.

European Community: Impacts of CAP reform continue. Reform of the Common Agriculture Policy (CAP) led to a sharp drop in support prices in 1993/94, and those prices will continue to fall over the next 2 years. CAP reform also requires large producers to set land aside in exchange for direct payments.

1994/95 support prices lower. EC producers will face lower support prices in 1994/95 than they did in 1993/94. In 1993/94, grain area fell, but the impact on wheat area was less than on coarse grains. Net returns to wheat producers remain higher than for coarse grains. In addition, reduced support for oilseeds and protein crops make wheat an attractive substitute crop.

Incentives for higher domestic wheat feeding. Domestic EC wheat feeding is projected up 16 percent for 1993/94, largely because of sharply reduced prices under CAP reform. Relatively high wheat feeding is expected to continue into 1994/95.

Mostly favorable moisture for 1994/95 winter wheat. Much of northern Europe experienced favorable planting conditions this autumn. This is unlike last fall, when wet weather at planting in the United Kingdom (UK) and drought in Spain drove wheat area down further than might have occurred in response to CAP reform. Southern France, the southeastern UK, and the Po Valley in Italy received excessive

rain, delaying planting but boosting soil moisture reserves. In Spain, planting conditions are much improved from a year ago. Favorable moisture conditions there are providing the crop with good prospects for germination and establishment.

Canada, Australia: Quality premiums may increase 1994/95 area. Planting conditions for the Canadian and Australian 1994/95 crops have yet to be determined because planting is 5 to 6 months away for both countries. Canada's crop is mostly spring wheat and Australia is just beginning to harvest its 1993/94 crop. Weather conditions and prices at the time of planting will influence producer decisions in both countries. The high premiums that now exist for high-quality wheat will likely continue through the marketing year and are likely to be an incentive for Canadian and Australian producers to expand production.

Argentina: Unaffected by quality premiums. Like Australia, Argentina will not plant its 1994/95 crop for another 6 months so planting conditions have yet to be determined. Unlike Australia and other exporters, though, premiums for high-quality wheat will not affect Argentina much. In fact, low world prices for lower quality wheat are likely to discourage production in Argentina. The large and expanding Brazilian market somewhat shields Argentinean producers, however, from the intense competition in world markets and the full effect of low prices.

1994/95 beginning stocks of major exporters projected to remain high. Stocks for non-U.S. exporters at 40.7 MMT would be the second highest on record.

EC stocks decline but 3rd highest on record. While EC beginning stocks for 1994/95 are projected to be lower than the year before, if realized, they would still be the third highest on record. EC stocks would be larger than other major exporters (including the U.S.) for the third year in a row.

Canada and Australian stocks increase. Canadian stocks are projected to be at their highest level since 1986/87. Australia stocks are projected to be at their highest level since 1984/85 and the third highest level on record.

U.S. Export Prospects for 1994:
Only Slightly Larger Due to Strong Competition
and Weak Import Demand

The conclusion from the discussion of world supply and use factors is that world trade will remain very competitive in 1994/95. Thus, we can, at this time, expect only slightly larger U.S. exports for 1994.

Exportable supplies ample. Supplies of other major exporters are expected to be ample--especially since their 1994/95 beginning stocks are projected to be high.

China and Russia import demand uncertain. Historically, China and Russia have been large importers of wheat from the U.S. and other exporters. For 1994/95 significant questions remain about their access to foreign exchange, their changing market environments, and U.S. and other exporter policies toward them.

Export Enhancement Program (EEP). EEP bonus levels have been rising in 1993/94. In October, EEP bonuses averaged almost \$53 per metric ton. Given that 1994/95 world trade is expected to be very competitive, EEP bonuses will likely remain high unless changes in policy by the U.S. or others occur.

The 1994 U.S. Wheat Balance Sheet: What Are Reasonable Projections At This Time?

Four Variables, Fourteen Words.

Based on the preceding discussion, it is not unreasonable to summarize current thinking on the 1994 U.S. wheat balance sheet, relative to 1993, by using 4 variables and 14 words:

- **Larger Supply.** The 1994 U.S. wheat supply is expected to increase based on larger beginning stocks and little change in production or imports.
- **Larger Domestic Use.** U.S. domestic use for 1994 is also expected to increase based on a modest increase in food use and on larger feed and residual use due to tight 1993 feed grain supplies.
- **Slightly Larger Exports.** U.S. exports are only expected to be up slightly from 1993 because of continued weak world import demand and continued strong competition. Wheat supplies of other exporters are expected to be ample and potential import demand by China and Russia is very uncertain because of a variety of market and political factors.
- **Stocks Steady to Not Significantly Higher.** Larger domestic use and slightly larger exports can be expected to offset much of the increase in supply. If this expectation is realized, then U.S. ending stocks for 1994 should show little change from this year.

1994 Prices and Hedging Opportunities.

ASCS's announcement of 1994 projected deficiency payment rates will implicitly include a projection of the 1994 national-average, market-year price. If this announcement is made at the same time as for the last two years, it will be in January. Regarding hedging, from the opportunities we have taken throughout this paper, it is clear that farmers are not the only ones who know how to hedge.

U.S. Wheat Program Provisions

In the final section of this paper, we would like to provide an update of various aspects of the 1993 U.S. wheat program and note aspects of the 1994 U.S. wheat program that are known to date.

1993 Wheat Program Update.

1993 wheat deficiency payments projected at \$2 billion. Yesterday at 3 p.m., NASS published the national average price received by producers during the first 5 months of the 1993 wheat marketing year (the 5-month price). Unless there is a big surprise, the 1993 total deficiency payment rate will be the difference between the 1993 target price of \$4.00 per bushel and this 5-month price (see discussion of rate formulas below). Based on NASS's previously published monthly price estimates and historical monthly price weights, a reasonable pre-release estimate of the 5-month price is about \$2.95 per bushel.

A 5-month price of \$2.95 would give a total deficiency payment rate of \$1.05. This rate would provide approximately \$2 billion in 1993 total wheat deficiency payments to producers. Because producers have already received advance deficiency payments based on a rate of 52.5 cents (50 percent of the \$1.05 rate projected last January before program signup), a total rate of \$1.05 would mean that additional deficiency payments (issued in December right before Christmas) would also be based on a rate of 52.5 cents. The actual 5-month price was \$2.97 which gives a realized total deficiency payment rate of 1.03 per bushel. After subtracting the advance rate from the total rate, the rate for the December payment is 50.5 cents per bushel.

Only limited benefits realized to date under new marketing loan provisions. As required under GATT trigger provisions of the Omnibus Budget Reconciliation Act (OBRA) of 1990, USDA implemented marketing loan provisions for 1993 wheat and feed grains. With this action, all program commodities plus soybeans, minor oilseeds, and rye now have marketing loan provisions.

Under marketing loan provisions, a producer can repay a wheat loan at a rate below what is owed to the Government on the loan (i.e., principal and interest) when local market prices are below the amount owed. This encourages producers to repay wheat loans rather than forfeit the grain into Government inventories when prices are low. The difference between the loan principal amount and the repayment rate is called the marketing loan gain (MLG). Producers can agree to forgo eligibility for taking out a loan and receive a "loan deficiency payment" (LDP) which is equal to that day's marketing loan gain.

For loan repayment purposes, the "posted county price" (PCP) is considered to be the local market price. PCPs are determined daily in each ASCS county office based on appropriate

terminal market prices and fixed bases that reflect transportation costs to terminals as well as other local supply and use factors. Because PCPs are calculated for each class of wheat grown in the county while county loan rates are the same for all classes, it is possible that on a particular day, a producer can earn a marketing loan gain or LDP for one class of wheat but not for another. As of November 10, 1993, \$817,830 in loan deficiency payments (LDPs) had been paid to wheat producers. The average LDP rate has been 10 cents per bushel. About two-thirds of the LDPs have been earned in Texas--largely for soft red winter wheat. No marketing loan gains have yet been earned for wheat.

The 1994 Wheat Program.

1994 ARP and target price unchanged from 1993. Both the acreage reduction program percentage for 1994 at 0 percent and the target price at \$4.00 per bushel are unchanged from 1993.

1994 loan rate not yet announced. As of November 21, 1993, the 1994 wheat loan rate had not been announced. Formulas for establishing statutory minimum loan rates are set by the 1990 farm bill and involve a somewhat-complicated, 6-step procedure. As has occurred since 1986, the 1993 wheat loan rate of \$2.45 per bushel was set at the statutory minimum level. The statutory minimum loan rate for 1994 at \$2.21 or \$2.32 (depending on whether one projects the 1994 ending stocks-to-use ratio above or below 30 percent) is lower than for 1993. Secretary Espy has indicated that he is considering setting 1994 loan rates for both wheat and feed grains above statutory minimum levels.

There is no statutory deadline for announcing the wheat loan rate as there is for the wheat ARP. However, if the "stocks-to-use" reduction from the basic loan rate is used, the loan rate is not effective until 60 days after USDA submits a report to Congress justifying its use. If the "competitive position" reduction is used, the loan rate must be announced at least 60 days prior to the June 1 start of the wheat marketing year.

Marketing loan provisions expected to continue in 1994. Under current law, marketing loan provisions are again mandated for 1994 wheat. Even if the GATT mandate for marketing loan provisions were removed during ongoing GATT negotiations, USDA would continue to have discretionary authority from the 1990 farm bill to implement marketing loan provisions. Whether producers can earn marketing loan gains or loan deficiency payments in 1994 will depend on relative levels of loan rates and market prices. Relative to a given market price, a higher loan rate increases the probability that marketing loan benefits can be earned.

Deficiency payment rate formula to change in 1994. As mandated by the Omnibus Budget Reconciliation Act of 1990, the formula for calculating the regular deficiency payment rate will change with the 1994 wheat program. Since target price/deficiency payment provisions were first implemented with the 1974 program, the regular deficiency payment rate has been

calculated from the national average price received by producers during the first five months of the marketing year (the 5-month price). The 1994 formula, which also was used for the 1991 winter wheat option, uses the market-year price as the basis for the payment price used in the rate calculation.⁷

Because the market-year price typically is 10 cents higher than the 5-month price, the formula change is projected to, on average, reduce outlays for deficiency payments. (A one-cent decrease in the deficiency payment rate generally reduces outlays for wheat deficiency payments by \$15 to \$20 million.) To avoid reducing producers' payments too drastically in years when the market-year price is "abnormally" high relative to the five-month price, the payment price cannot be higher than the 5-month price plus 10 cents. Both advance deficiency payments and a December payment will continue to be made. The December, 1994 payment will be based on the guaranteed rate as calculated from the 5-month price plus 10 cents. The formula for calculating the Findley deficiency payment rate will not change. The Findley rate will continue to be calculated as the difference between the basic loan rate and the higher of the market-year price and the announced loan rate.

0/92 becomes 0/85 (and sometimes 0/92) in 1994. Under the Omnibus Budget Reconciliation Act of 1993, what previously has been the 0/92 program will become, beginning in 1994, the 0/85 (and sometimes 0/92) program.

The basic program will be a 0/85 program. Under 0/85, producers who participate in the wheat program and idle or plant to selected crops 15 percent of their "maximum payment acres" for no payments (see footnote 4), will receive deficiency payments on additional base acres idled or planted to selected crops. The deficiency payment rate on 0/85 payment acres will, as for 0/92, continue to be guaranteed at the projected deficiency payment rate.

Exceptions to the 0/85 program are mandated for producers who plant a threshold level of selected crops, who qualify for prevented plantings, or who have had reduced yields caused by a natural disaster. Producers meeting these exceptions will continue to be eligible for a 0/92 program. Under a 0/92 program, payment acres are higher because the non-payment acres are only 8 percent rather than 15 percent. Operational details of the exceptions are being worked out in ASCS. Impacts of this change on 1994 wheat production are not expected to be large but will depend on how the exceptions are implemented.

⁷Technically, under the pre-1994 formula, the regular rate was calculated as the difference between the target price and the higher of the 5-month price and the basic loan rate. Under the 1994 formula, the rate will be calculated as the difference between the target price and the higher of the basic loan rate and a "payment" price. The payment price will be calculated as the lower of the market-year price or the 5-month price plus ten cents.

APPENDIX 1. U.S. Wheat Supply, Use & Program Variables. 1/

<u>Marketing Year:</u>	<u>1988</u>	<u>1989</u>	<u>1990</u>	<u>1991</u>	<u>1992</u>	<u>1993</u>	<u>1994</u>
PROGRAM VARIABLES							
Wheat Base (Mil. ac.)	84.8	82.3	80.5	79.2	78.9	78.5 2/	
Acreage Reduction %	27.5%	10.0%	5.0%	15.0%	5.0%	0.0%	0.0%
Participation %	85.8%	78.2%	82.9%	85.4%	83.2%	87.0% 2/	
TOTAL BASE IDLE (Mil. ac.)	29.6	18.4	17.8	26.3	17.9	15.8 2/	
Annual Idled	22.5	9.6	7.5	15.9	7.3	5.0 2/	
ARP ACR	19.2	6.1	2.2	10.1	3.3	0.0	
0,50/92	3.3	3.5	5.3	5.8	4.0	5.0 2/	
CONSERVATION RESERVE	7.1	8.8	10.3	10.4	10.6	10.8	
ACRES (Mil. ac.)							
Planted Acres	65.5	76.6	77.2	69.9	72.3	72.1	
Harvested Acres	53.2	62.2	69.3	57.7	62.4	63.0	
Harvest/Plant Ratio	81.2%	81.2%	89.8%	82.5%	86.3%	87.4%	
YIELD, Harv (Bu./ac.)	34.1	32.7	39.5	34.3	39.4	38.4	
Yield, Program	34.9	34.3	34.1	34.4	34.4	34.4	
Begin Stocks (Mil bu.)	1,261	702	536	866	472	529	682
Production	1,812	2,037	2,736	1,981	2,459	2,422	
Imports	23	23	37	41	70	85	
TOTAL SUPPLY	3,096	2,762	3,309	2,888	3,001	3,036	
Food (Mil. bu.)	726	749	785	785	830	835	
Seed & Industrial	103	100	90	94	93	94	
Feed & Residual	146	143	500	255	196	300	
Total Domestic	975	992	1,375	1,134	1,119	1,229	
Exports	1,419	1,233	1,068	1,281	1,353	1,125	
TOTAL USE	2,394	2,225	2,443	2,415	2,472	2,354	
ENDING STOCKS (Mil. bu.)	702	536	866	472	529	682	
CCC-Owned	190	117	165	152	150	150	
Farmer-Owned Reserve (FOR)	287	144	14	50	28	5	
9-Month Loans Outstanding	18	30	189	20	47	60	
Other	207	245	498	250	304	467	
"FREE" STOCKS (Mil. bu.)							
End Stocks - CCC	512	419	701	320	379	532	
End Stocks - CCC & FOR	225	275	687	270	351	527	
End Stocks - CCC, FOR, & 9-Month Loans	207	245	498	250	304	467	
STOCKS/USE	29.3%	24.1%	35.4%	19.5%	21.4%	29.0%	
MARKET YEAR PRICE (\$/bu.)	3.72	3.72	2.61	3.00	3.24	2.85-3.10	
5-month price	3.54	3.78	2.72	2.65	3.19		
Target Price	4.23	4.10	4.00	4.00	4.00	4.00	4.00
Basic Loan Rate	2.76	2.57	2.44	2.52	2.58	2.86	
Announced Loan Rate	2.21	2.06	1.95	2.04	2.21	2.45	
INCOME INDICATORS (\$ Bil.)							
Value of Production	6.7	7.6	7.1	5.9	8.0	7.2	
Deficiency Payments	1.2	0.6	2.4	2.2	1.4		

NOTES: 1/ USDA Estimates/Forecasts as of November 9, 1993. 2/ Based on 1993 Final Enrollment Report issued on June 15, 1993. The pending 1993 Preliminary Compliance Report will provided updated estimates.

APPENDIX 2. World Wheat Supply, Use & Trade. 1/

WORLD SUPPLY AND USE

Local Market Years:	<u>1989/90</u>	<u>1990/91</u>	<u>1991/92</u>	<u>1992/93</u>	<u>1993/94</u>
AREA & YIELD					
Harv. Area (Mil. Hect.)	225.8	231.4	222.3	222.5	222.2
Yield (Met. Tons/Hect.)	2.36	2.54	2.44	2.52	2.52
Begin Stocks (Mil. MT)	120.2	121.0	145.4	128.7	141.3
Production	533.0	588.1	542.3	560.6	559.4
TOTAL SUPPLY	653.2	709.1	687.7	689.3	700.7
Food and Other Use	428.2	431.2	440.7	439.4	446.0
Feed Use	104.0	132.5	118.3	108.6	115.5
TOTAL USE	532.2	563.7	559.0	548.0	561.5
ENDING STOCKS	121.0	145.4	128.7	141.3	139.1
U.S.	14.6	23.6	12.8	14.4	18.6
Other Major Exporters	22.4	30.4	36.1	41.1	40.7
Australia	3.0	2.8	2.9	5.7	7.5
Canada	6.4	10.3	10.1	10.7	11.5
EC-12	13.0	16.5	22.8	24.7	21.7
Argentina	0.0	0.8	0.3	0.0	0.0
Other	84.0	91.4	79.8	85.8	79.8
STOCKS/USE	22.7%	25.8%	23.0%	25.8%	24.8%

WORLD TRADE

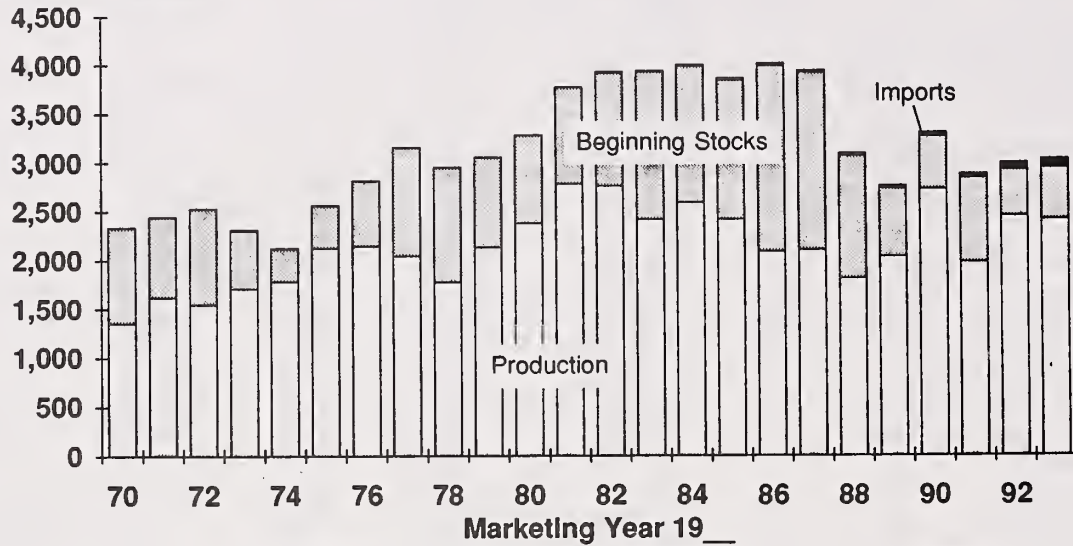
World Trade Year:	<u>1989/90</u>	<u>1990/91</u>	<u>1991/92</u>	<u>1992/93</u>	<u>1993/94</u>
EXPORTS (Mil. MT)	102.0	101.6	108.9	109.4	99.4
U.S.	33.5	28.3	35.1	37.0	30.5
EC-12	21.3	20.7	21.9	22.0	19.5
Canada	17.0	20.5	23.3	21.5	18.5
Argentina	5.6	4.7	5.5	6.5	5.5
Australia	10.8	11.8	8.2	9.1	11.2
Other	13.8	15.6	14.9	13.3	14.2
EXPORT MARKET SHARE (Percent)					
U.S.	32.8	27.9	32.2	33.8	30.7
EC-12	20.9	20.4	20.1	20.1	19.6
Canada	16.7	20.2	21.4	19.7	18.6
Argentina	5.5	4.6	5.1	5.9	5.5
Australia	10.6	11.6	7.5	8.3	11.3
Other	13.5	15.4	13.7	12.2	14.3
IMPORTS (Mil. MT)					
FSU	20.0	22.8	20.4	21.7	17.1
China, Republic of	12.5	9.3	14.5	6.1	6.0
Japan, Taiwan, S. Korea	8.2	10.4	10.1	9.8	11.5
Egypt, Algeria, Morocco	12.4	12.0	10.1	11.9	13.9
India, Pakistan	2.0	3.1	2.1	5.3	1.8
Other	44.9	42.3	42.8	45.2	49.7

1/ USDA Estimates/Forecasts as of November 9, 1993. Includes intra-FSU trade. Excludes intra-EC trade.

1993 U.S. Supply: A Benchmark for 1994

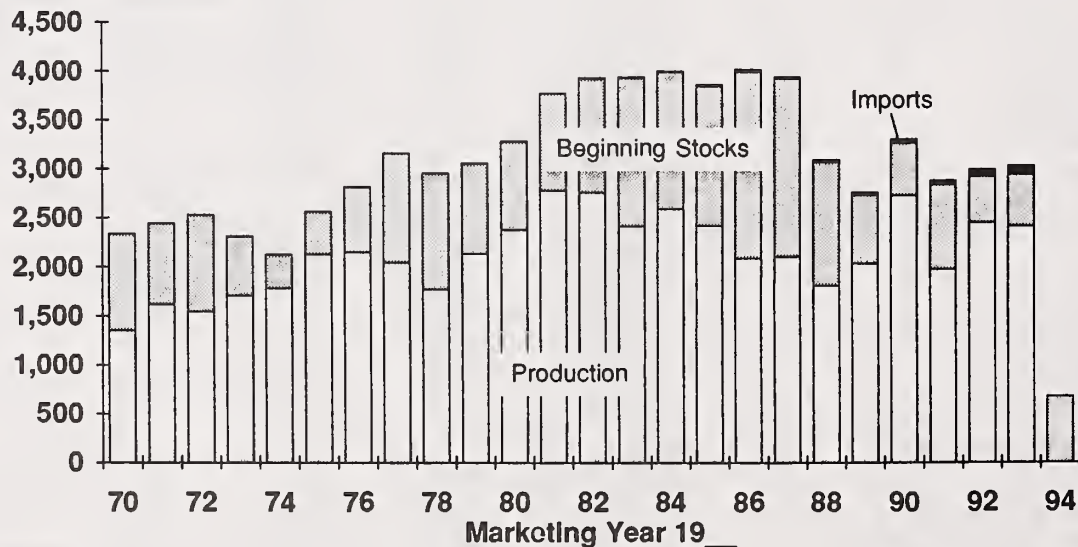
11-93 WASDE Estimates/Forecasts

Million Bushels



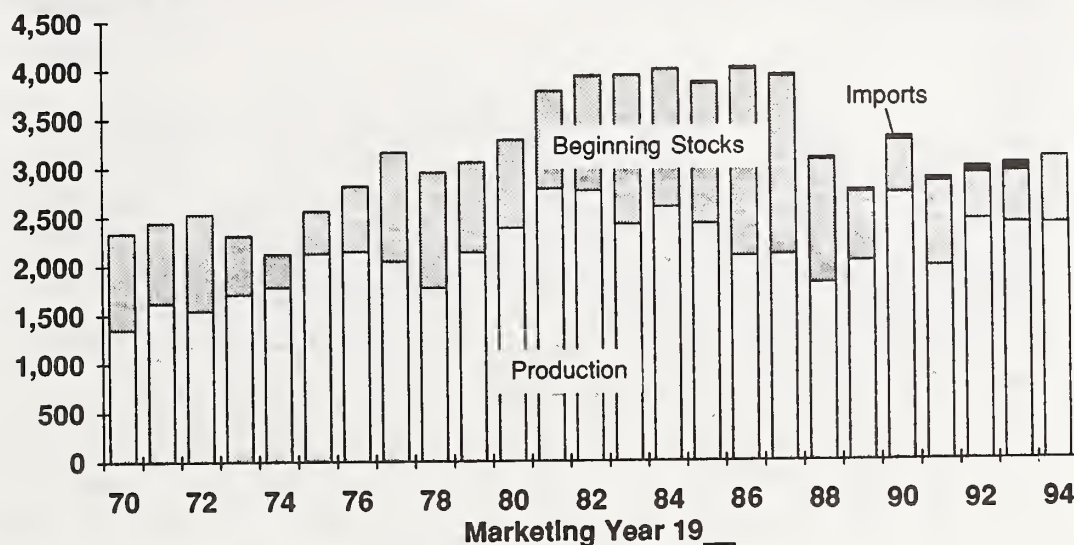
1994 U.S. Beginning Stocks: Higher by 153 Million Bushels

Million Bushels



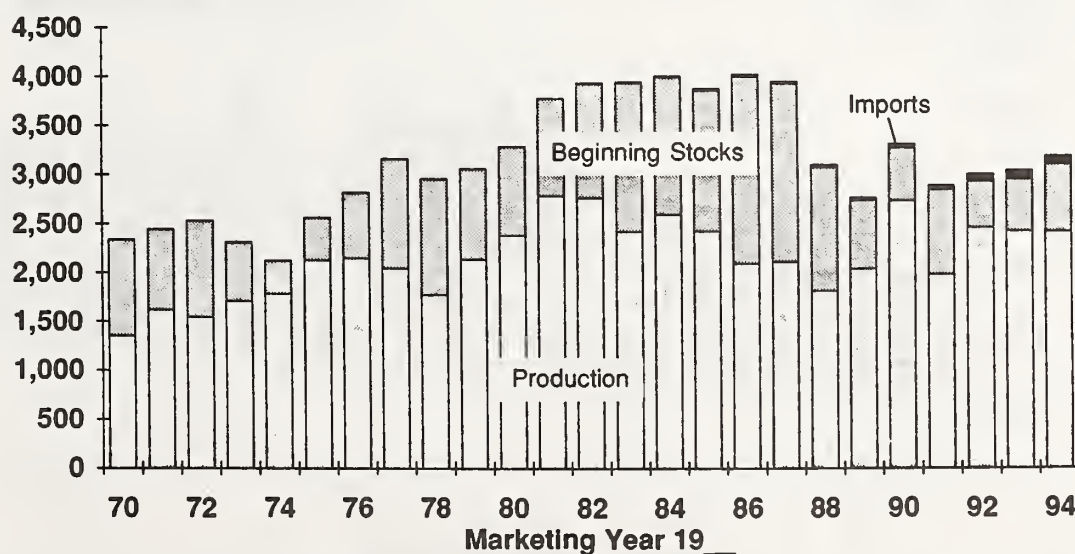
1994 U.S. Production: Little Change if "Normal" Conditions

Million Bushels

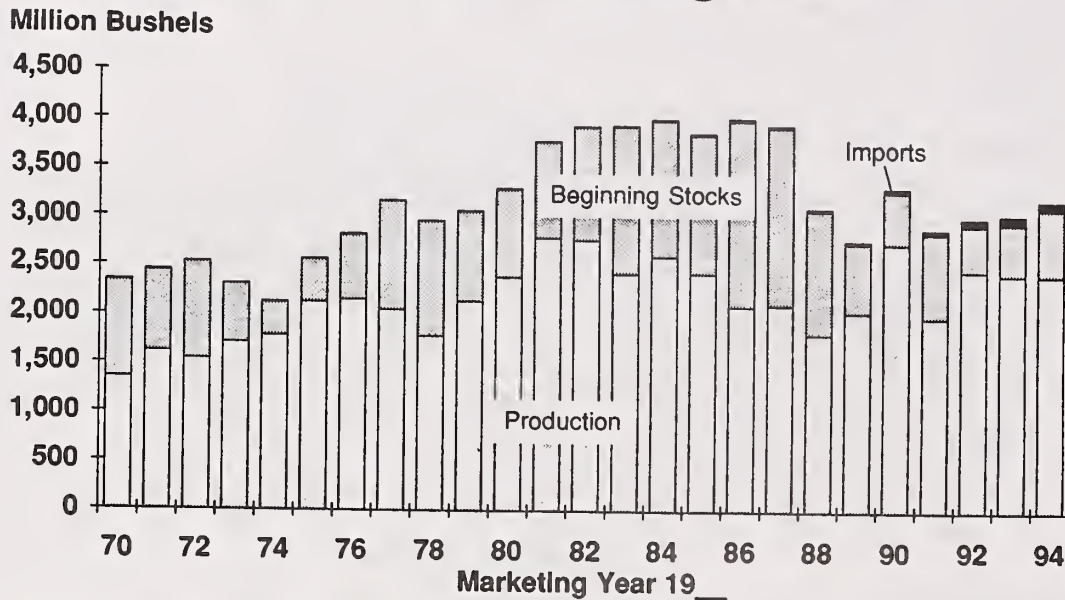


1994 U.S. Imports: Assume Unchanged

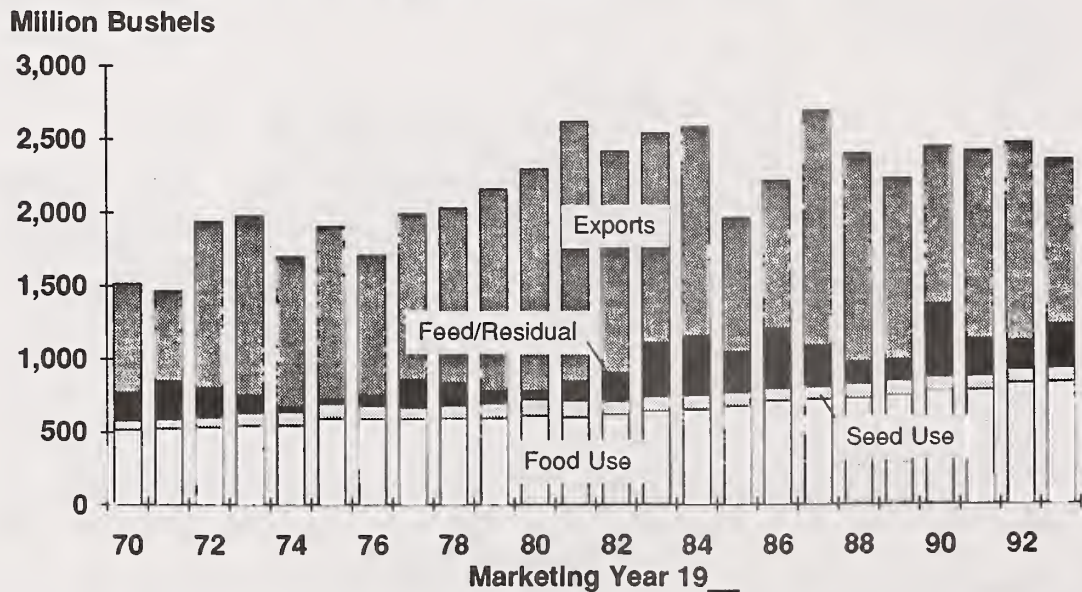
Million Bushels



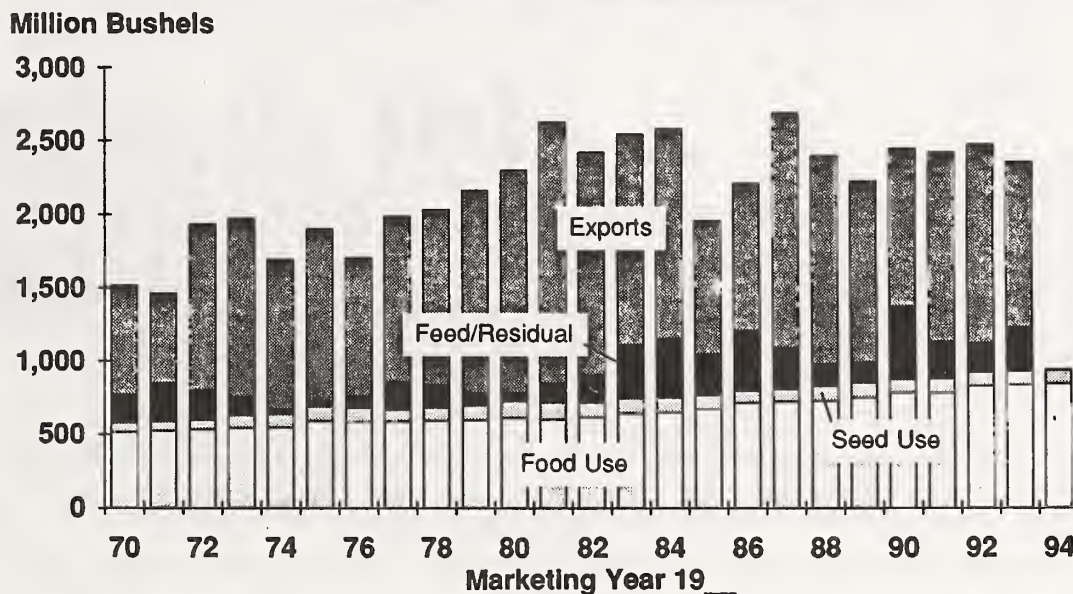
1994 U.S. Supply Summary: Higher from + Beginning Stocks



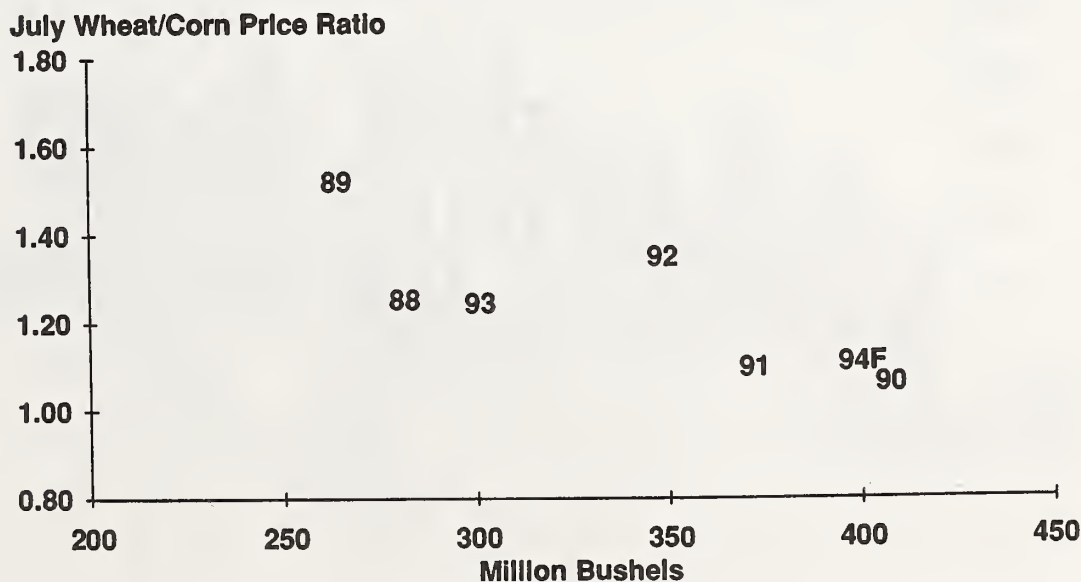
1993 U.S. Use: A Benchmark for 1994 11-93 WASDE Estimates/Forecasts



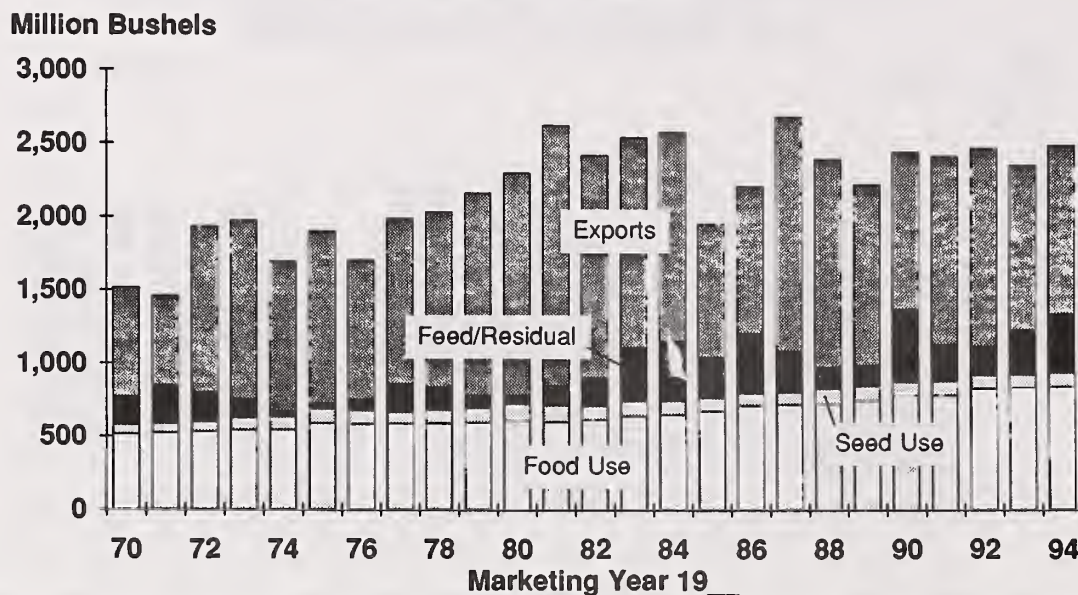
1994 U.S. Food Use and Seed Use: Up Slightly and Little Change



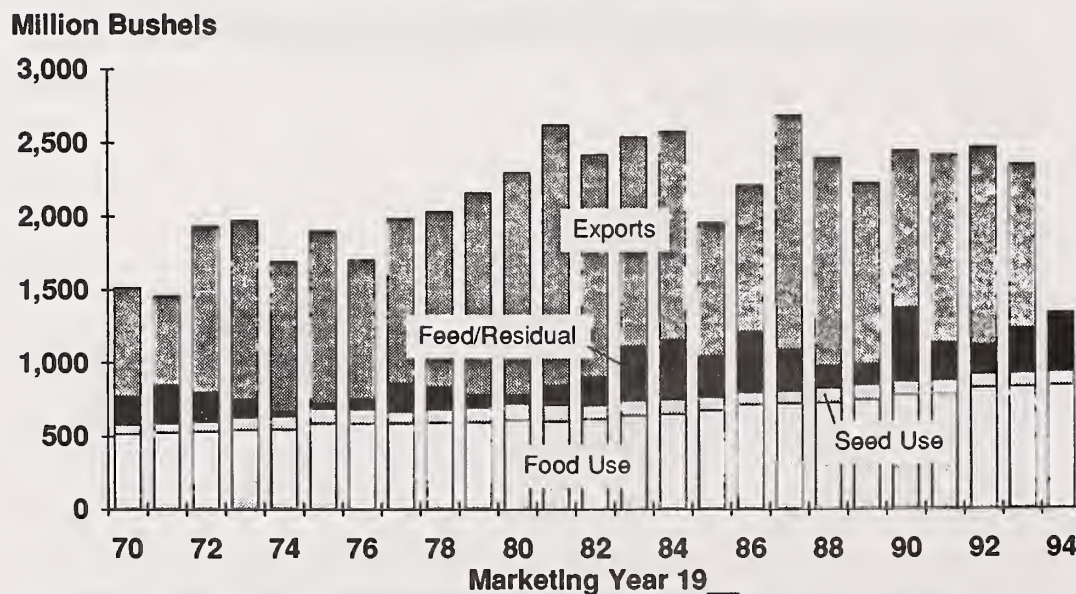
As July Wheat/Corn Price Ratio DECLINES 1st Quarter Feed and Residual INCREASES



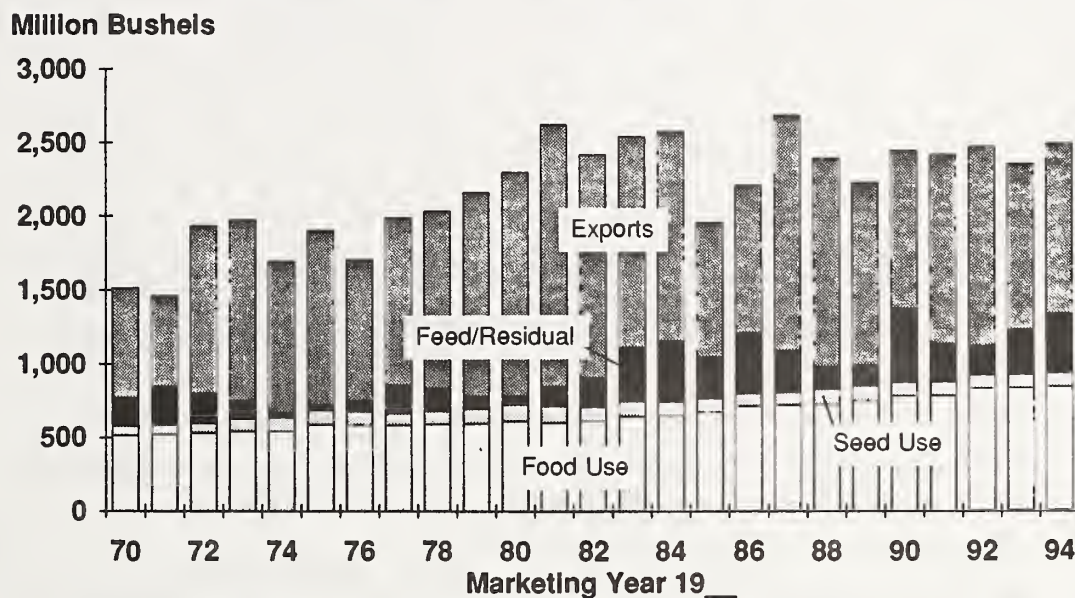
1994 U.S. Exports: Slightly Higher



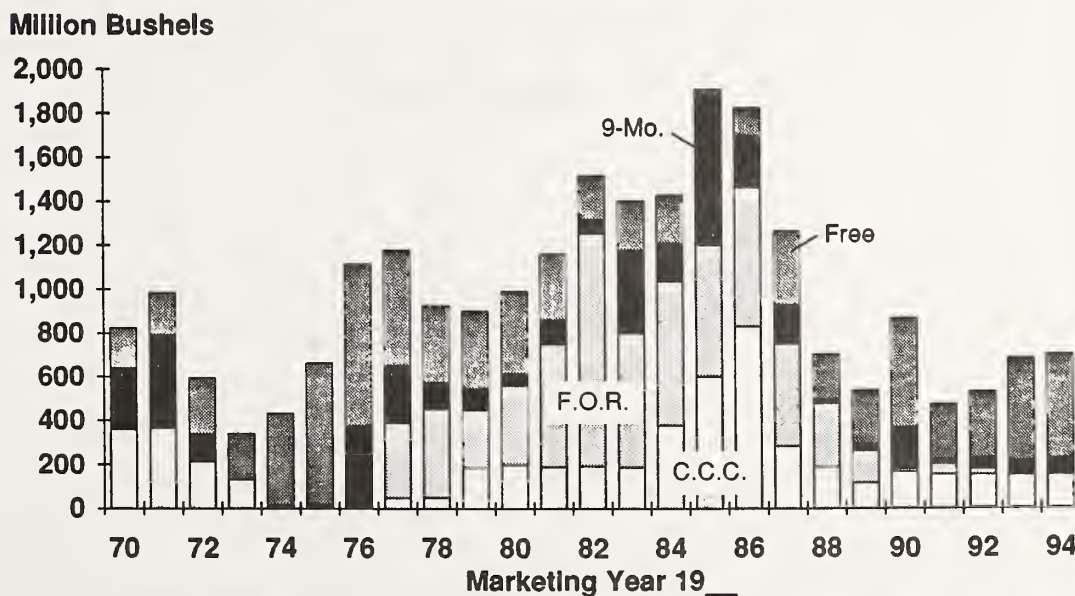
1994 U.S. Feed and Residual Use: Significantly Higher



1994 U.S. Use Summary: Higher from + Feed, Exports, Food

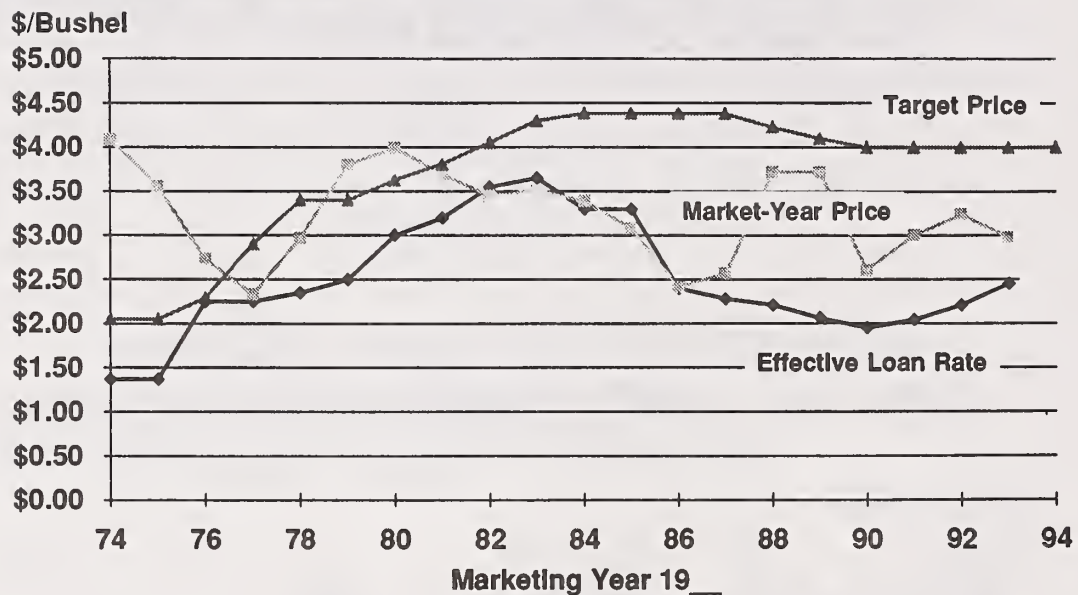


1994 U.S. Ending Stocks: Steady to Up Free Stocks to Remain Large

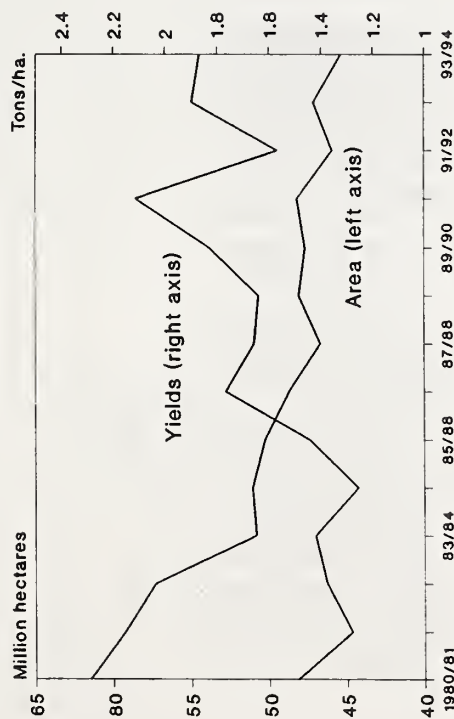


1994 U.S. Market-Year Price: ???

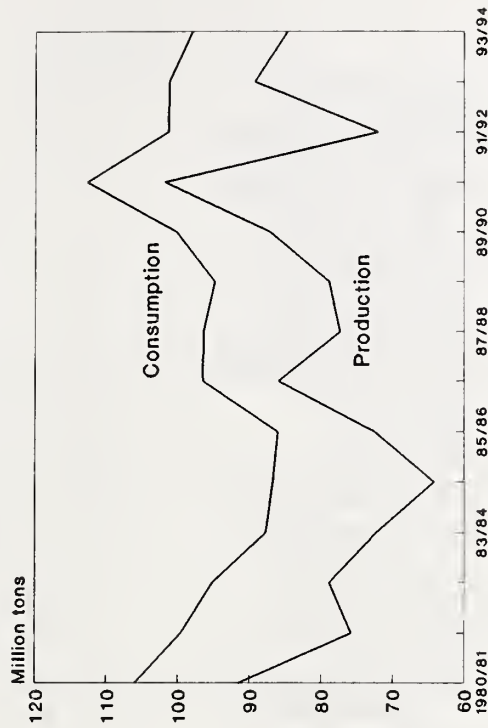
Stocks Steady to Up?, Stocks-to-Use Down?



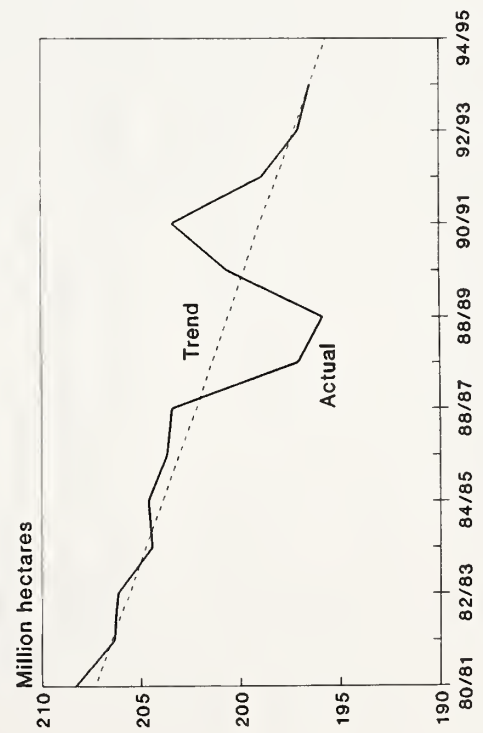
**FSU Area Declining
Yields Highly Variable**



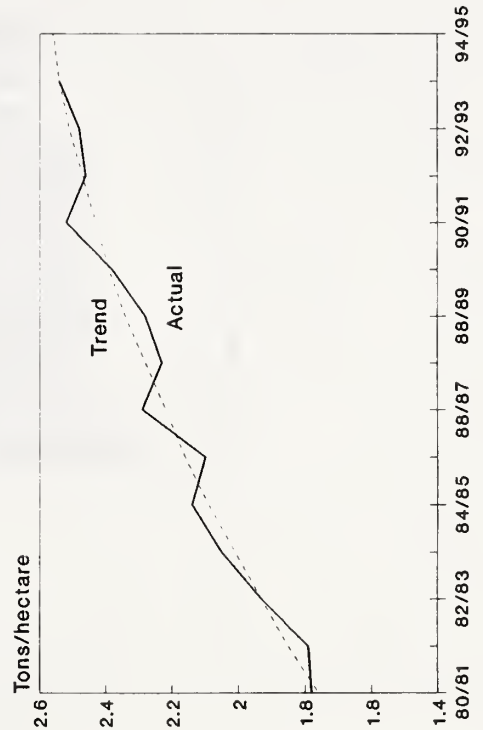
FSU Production and Consumption



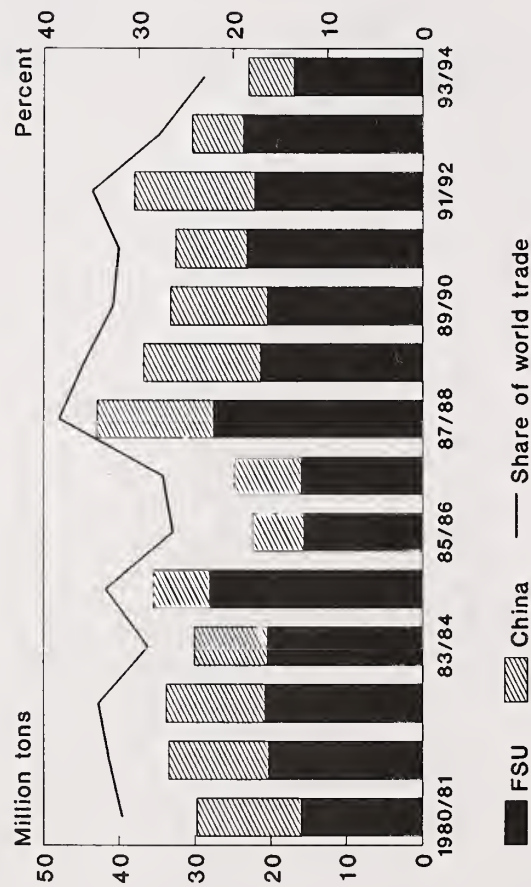
Foreign Wheat Area



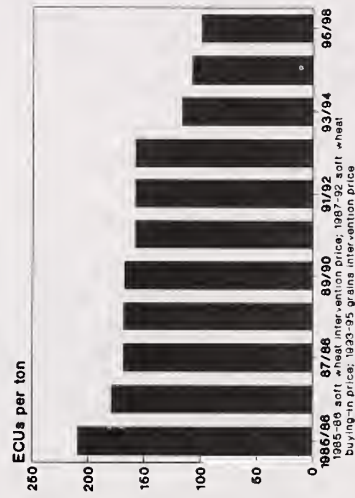
Foreign Wheat Yields



Imports by the FSU and China and Share of World Trade



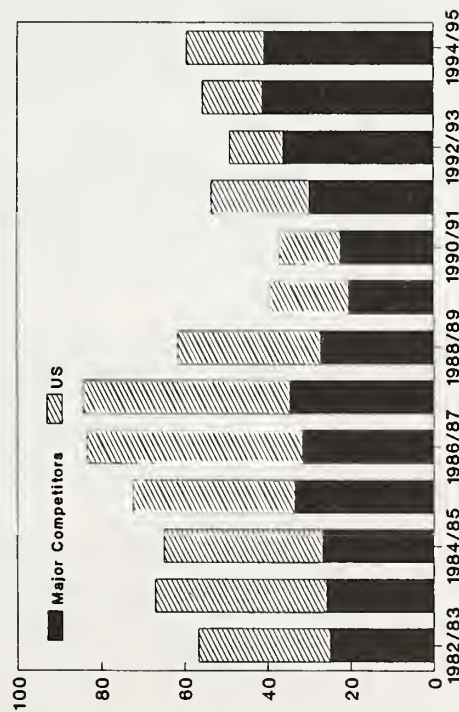
EC CAP Lowers Wheat Support Prices



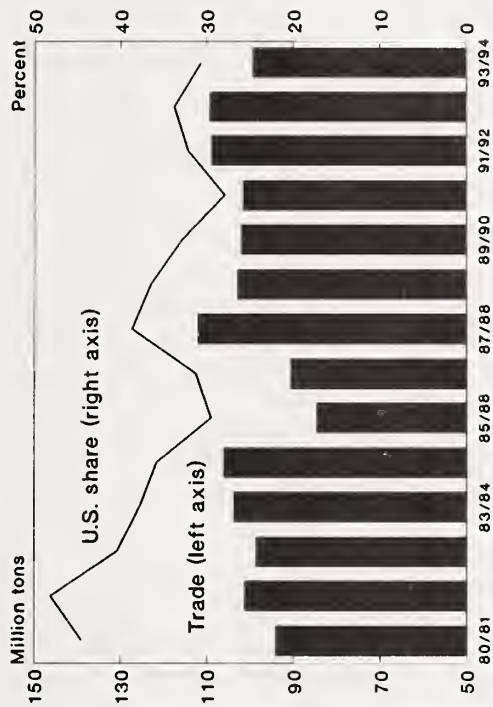
Wheat to Corn Export Price Ratio



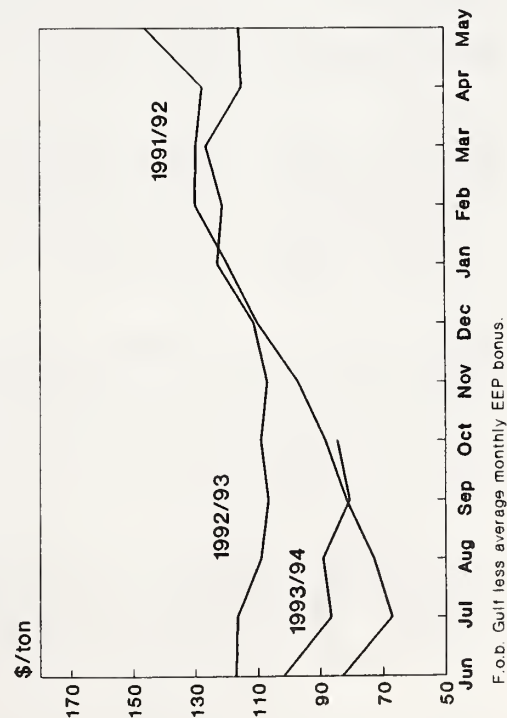
Exporters' Beginning Stocks
Major Competitors' Share Remains High



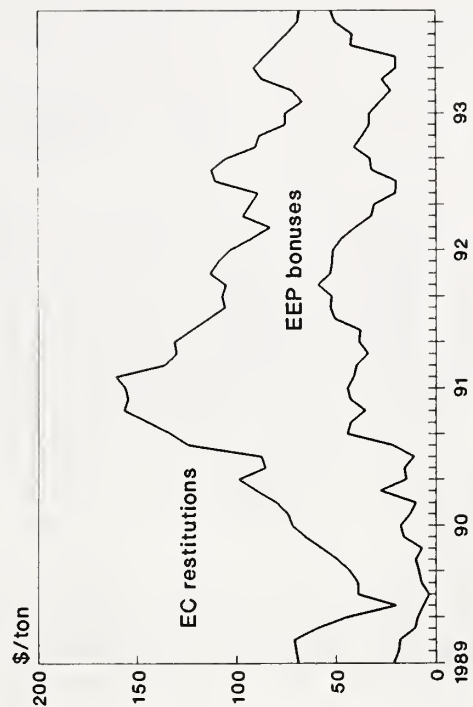
World Wheat Trade and US Share



U.S. Wheat Export Prices



U.S. and EC Wheat Export Subsidies



THE WORLD WHEAT SITUATION**ANDREW B. BELLINGHAM****PRES., A. B. BELLINGHAM COMMODITY TRADE ANALYSIS**

MY COMMENTS WILL CONCERN THE WORLD WHEAT SITUATION AND THE US POSITION. THE 93-4 SEASON BEGAN WITH PROSPECTS OF ABUNDANT, ALTHOUGH NOT BURDENSOME, SUPPLIES OF WHEAT IN THE HANDS OF MAJOR EXPORTERS, AND LOWER WORLD IMPORT DEMAND. THE SUMMER RAINS CAME, THEN THE FLOODS, AFFECTING PRIMARILY CORN AND BEANS, BUT ALSO WHEAT, AND ALL MARKETS MOVED HIGHER. THIS RESULTED IN A SCALING DOWN OF PRODUCTION ESTIMATES FOR THE US AND CANADA, AND A SHARP DECLINE IN QUALITY. THE SAME WAS HAPPENING IN EUROPE WHERE RAINS ACROSS N. EUROPE RESULTED IN DECLINES IN OUTPUT AND, AS WITH N. AMERICA, MUCH REDUCED QUALITY.

USDA EEP SALES CONTINUED WITH BONUSES MOVING HIGHER, AND THE EC SOLD QUALITY WHEAT FROM INTERVENTION STOCKS. CANADA PASSED ON THE CHINESE BUSINESS PRIMARILY DUE TO PRICE, AND THEN ESSENTIALLY WITHDREW AS A SELLER UNTIL ITS QUALITY SITUATION WAS BETTER KNOWN.

FOR EACH OF THE THREE MAJOR N. HEMIS. EXPORTERS, US, CANADA, AND THE EC, WHEAT PRODUCTION ESTIMATES DECLINED SLIGHTLY BUT, FAR MORE IMPORTANTLY, QUALITY DETERIORATED DRASTICALLY AND PREMIUMS FOR PROTEIN, TEST WEIGHT AND MILLING QUALITIES SKY ROCKETED. ALL OF THAT SOUNDS BULLISH, AND IT WAS FOR PRICES ON QUALITY WHEAT.

HOWEVER, DURING THE SUMMER MONTHS, BUYERS OF ONLY STANDARD QUALITY MILLING WHEAT SUCH AS MOROCCO OR EGYPT PURCHASED AT VERY ATTRACTIVE PRICES. FUTURES MOVED SIDEWAYS IN A FAIRLY NARROW RANGE AND EEP FOB PRICES AT THE GULF IN THE 60'S WERE COMMON. SELLERS WERE WILLING DISCOUNTERS AND THE USDA WAS SEEN AS A READY SELLER WITH HIGH BONUSES.

THROUGHOUT THE SUMMER ESTIMATES OF WORLD IMPORT DEMAND STEADILY DECLINED. WHAT HAD ORIGINALLY BEEN SEEN AS A RELATIVELY SMALL DECLINE IN WORLD IMPORT DEMAND FOR WHEAT BECAME INSTEAD A SHARP FALL IN WORLD WHEAT TRADE TO ABOUT 96 MLN MT. THAT IS ROUGHLY 13 MLN MT BELOW 92-3, AND THE LOWEST LEVEL SINCE THE MID 80'S. IT IS ALSO ONE OF THE LARGEST ANNUAL DECLINES.

DURING THE SUMMER, THE RUSSIAN/FSU CROP OUTLOOK IMPROVED (BUT WAS FINALLY HIT BY RAIN), AND CHINA'S PRODUCTION PROSPECTS INCREASED. THE ONLY SHORT FALL IN WHEAT PRODUCTION THAT RESULTED IN A SIGNIFICANTLY HIGHER IMPORT DEMAND WAS IN N. AFRICA. - MOR. AND ALG.

FROM THE EARLY STAGES WE ALL KNEW THAT INDIA'S NEEDS WOULD DROP TO ONLY THE MINIMUM AID LEVEL AS OPPOSED TO THE 3 MLN LAST YR.

WHEAT AND PRODUCT IMPORTS BY SELECTED COUNTRIES AND REGIONS, 1,000 MT (1)

IMPT	1988/89		1989/90		1990/91		1991/92		1992/93		1993/94	
	TOTAL	US	TOTAL	US	TOTAL	US	TOTAL	US	TOTAL	US	TOTAL	US
EC12	2262	699	1590	882	1466	633	1160	533	1500	453	1500	450
O WE	893	160	638	72	586	144	565	142	775	237	575	200
BULG	300	0	200	0	300	0	450	0	450	0	400	0
POL	1500	0	1200	31	350	125	200	51	2000	198	1500	150
YUGO	20	0	100	0	50	15	20	0	150	0	200	50
OTH	511	0	-315	1	612	0	436	74	950	302	700	200
EEUR	2331	0	1185	32	1312	139	1106	91	3550	500	2800	400
FSU	16350	4527	20440	4290	23190	2815	22190	6908	23000	5117	16800	2600
RUSS			8160		11015		11508		13325	3109	8300	1100
UZBK			3600		3800		3500		3200	613	3100	950
UKR			1000		1000		900		1200	637	800	200
BYEL			1450		1500		1100		1100	52	900	40
GEOR			1200		1050		850		400	149	400	60
OTH			5030		4825		4332		3775	557	3300	250
IRAN	3325	0	5221	0	3996	0	2431	0	3000	0	2500	0
IRAQ	3433	750	3400	1094	124	0	1705	0	500	0	1000	0
ISRA	508	482	673	581	764	499	822	489	730	565	700	550
TURK	686	51	3686	641	189	0	127	1	800	21	500	175
BANG	2077	884	1234	536	1550	647	1414	744	1050	580	1050	575
IND.	1650	1935	119	73	150	45	81	32	2950	863	100	75
PAK	2152	1719	1916	1259	1026	692	2217	1422	2750	1675	1800	1000
SriL	668	507	766	685	563	502	747	603	900	841	750	650
INDO	1717	179	1863	191	1973	192	2520	15	2600	6	2700	50
PHIL	1169	1063	1314	837	1470	1303	1663	1301	2000	1577	2050	1600
S KO	2822	1816	2009	1483	4206	1863	4396	1526	3895	1406	4500	1400
JAPN	5405	2598	5630	2941	5622	3051	5786	3173	5700	3483	5800	3350
CHIN	15500	7749	12800	5515	9406	3601	15823	5422	6600	2258	4200	1800
TAIW	948	810	803	671	805	715	847	813	900	794	900	800
YEM	1040	173	1023	155	1571	353	1682	559	1600	993	1400	900
OTH	2222	565	5096	500	6652	1225	7054	739	5869	1300	5850	700
ASIA												
OCE.	45322	21281	47553	17162	40067	14688	49315	16839	41844	16362	35800	13625
EGYP	7408	3926	7258	3605	5668	2577	5781	3623	6000	3602	5500	2900
ALG.	4200	967	4160	1068	4600	1283	3700	730	3800	858	4250	900
MOR.	1378	1028	1069	507	1941	611	1532	234	3200	1758	4000	2100
S AF	250	34	300	13	500	101	190	2	850	531	800	500
NIG.	250	0	300	0	480	0	450	0	850	677	1500	1200
TUN.	980	272	964	349	1022	486	523	181	700	313	750	250
OTH	3934	736	3830	722	6024	1020	5288	982	5105	913	4725	900
AFR.	18400	6963	17881	6264	20235	6078	17464	5752	20555	8652	20875	8750
BRAZ	765	0	1518	133	2805	0	5177	652	5400	151	5000	185
VENE	994	490	862	672	1110	497	1180	335	1150	804	1150	650
MEX.	1156	1025	260	224	486	397	739	252	1410	744	1500	800
COL.	663	407	646	437	693	499	678	267	860	244	750	225
US		0	637	0	935	0	1196	0	1857	0	2200	0
OTH	5722	2443	4086	2198	4687	2522	5482	1950	4893	2437	4900	2065
W. HE	9300	4365	8009	3664	10716	3915	14452	3456	15570	4380	15500	3925
OTH	1156	627	4752	350	3990	515	2213	844	2608	953	2050	500
TOT.												
WHT	89714	36738	95948	31997	95462	27745	102465	33274	103402	35154	89900	29350
PRO	6300	1884	6100	1482	6100	1139	6000	1429	6000	1558	6000	1100
TOT.	96014	38622	102048	33479	101562	28884	108465	34703	109402	36712	95900	30450
M BU	3528	1419	3750	1230	3732	1061	3985	1275	4020	1349	3524	1119

(1) Total impt data Jul-Jun; U.S. data Jun-May, prod. data in wht equiv.

E. Germ. incl. in EC totals for all yrs, Baltics incl. in total FSU

* FSU intra trade included as follows 88-9 5.0, 89-0 5.0, 90-1 8.5, 91-2 92-3 6.6,

A. B. Bellingham CTA 05103,05273,06023,06283,07213,08043,10183,11113

INDIA'S 92-3 IMPORTS WERE THE EXCEPTION, AND FOLLOWED THE EL NINO AFFECTED CROP. PAKISTAN'S IMPORTS WERE ALSO EXPECTED TO BE LOWER DUE TO A BETTER CROP, AND THE ESTIMATE OF PAKISTAN'S NEEDS HAS CONTINUED TO FALL.

THE DECLINE IN RUSSIAN/FSU DEMAND WAS PRIMARILY DUE TO THE IMPROVED DOMESTIC PRODUCTION, BUT ALSO WAS A FUNCTION OF RESTRICTED WESTERN CREDITS. RUSSIA CAME OUT OF 92-3 WITH IMPROVED SUPPLIES, PRIVATIZATION HAS CAUSED PRICES TO RISE AND INTERNAL USE TO DECLINE. THE RUSSIAN AND KAZAKH SPRING WHT CROPS WERE REDUCED BY SEPT. AND OCT. RAIN AND SNOW, AND LOSSES OVER THE ENTIRE FSU ARE IN THE AREA OF 10 MLN MT. HOWEVER IMPORT ESTIMATES FROM THE WEST HAVE NOT BEEN INCREASED, AND INSTEAD HAVE BEEN SCALED BACK OVER THE PAST 3-4 MONTHS. IMPORTS FOR THE FSU ARE NOW EXPECTED TO BE 16.8 MLN MT IN 93-4, MORE THAN 6 MLN BELOW LAST YEAR'S 23 MLN.

RUSSIAN OFFICIALS SEEM SATISFIED WITH SUPPLIES. THE US PL 480 PROGRAM FINALLY COMPLETED MUCH LATER THAN WAS ORIGINALLY EXPECTED AND NEW WESTERN AG CREDITS AND SALES ARE NOT EXPECTED UNTIL AT LEAST EARLY 94. THE DECLINE IN OUTPUT WILL MEAN THAT TRADE BETWEEN THE REPUBLICS (PRIMARILY EXPORTS BY KAZAKH AND RUSS.) WILL BE LESS THAN HAD BEEN EXPECTED EARLIER BUT, I REPEAT, SO FAR THERE SEEMS LITTLE REASON TO ATTEMPT TO TRANSLATE THAT INTO AN INCREASE IN IMPORTS FROM THE WEST.

CHINA'S CROP TURNED OUT TO BE ANOTHER RECORD, AND IMPORT FORECASTS HAVE BEEN STEADILY REDUCED. IN FACT, CHINA RECENTLY FORECAST ANOTHER RECORD GRAIN OUTPUT FOR 94. LAST YEAR CHINA IMPORTED 6.6 MLN MT AND WE ARE ESTIMATING IMPORTS OF 4.2 THIS YEAR. HERE ALSO INTERNAL CHANGES ARE PLAYING A BIG ROLE. CHINA IS PRIVATIZING, AND PRICE HAS BECOME MORE IMPORTANT IN DETERMINING CONSUMER AND MILL BUYING DECISIONS. THE FEDERAL GOVT. HAS CUT BACK ON SUBSIDIES TO PROVINCIAL GRAIN BUREAUS FOR CARRYING OF GRAIN, WHICH HAS RESULTED IN STOCKS MOVING INTO THE MARKET. THAT, COMBINED WITH ANOTHER RECORD CROP, REDUCED IMPORT NEEDS. HOWEVER, RECENTLY THE FED. GOVT. ANNOUNCED IT WOULD INCREASE ITS HOLDINGS, WHICH CONFUSES THE PICTURE OF PRIVATIZATION AND THE USE OF MARKETS.

LOOKING AT THE EXPORTERS SIDE BRIEFLY, CANADA'S CROP LIKE THE US SPRING HARVEST WAS HIT BY RAIN CAUSING QUALITY LOSSES. KEEP IN MIND THIS FOLLOWS LAST YEAR'S POOR QUALITY HARVEST THAT WAS DUE TO THE EARLY FROST. CANADA HAS SUFFERED IN THE LAST FEW YEARS WITH VERY LITTLE MOVING TO RUSSIA/FSU, DUE TO MOSCOW'S LACK OF PAYMENT AGAINST THE OLD CREDIT LINE, AND IT LOOKS AS THOUGH THIS YEAR WILL BE SIMILAR. ALSO THE DECLINE IN CHINA'S PURCHASES HAS HURT. LAST YEAR'S FEED WHT IS STILL BEING SOLD, MAINLY TO S. KOREA, BUT NOW ALSO VERY IMPORTANTLY TO THE US, AND THERE ARE ADDITIONAL SUPPLIES THIS YEAR. WHEREAS LAST YEAR CANADA HAD QUALITY STOCKS, THAT IS LARGELY DEPLETED THIS YEAR.

THE EC CROP WAS HIT BY RAIN ACROSS THE NORTH. MUCH OF THE QUALITY NEEDS FOR EXPORT AND DOMESTIC NEEDS ARE BEING SUPPLIED OUT OF INTERVENTION STOCKS, WHICH ARE ABUNDANT. EC FEED USE OF GRAIN IN GENERAL, AND WHEAT IN PARTICULAR IS UP SHARPLY THIS YR, DUE TO THE

MAJOR WHEAT EXPORTERS, MLN MT AND HA

Exporters	ARG	AUS	CAN	EC *	NON US SUB- TOTAL	US	MAJOR FIVE TOTAL	OTHER INCL FSU**	WORLD TOTAL
Mktg. Yr.	D/N	O/S	A/J	J/J		J/M			
1987-88 Area	4.8	9.1	13.5	16.6	44.0	22.6	66.6	153.3	219.9
Prod	8.8	12.4	25.9	75.5	122.6	57.4	180.0	322.4	502.4
M Y Expt	3.7	9.9	23.5	15.8	52.9	43.5	96.4	6.5	102.9
J-J Expt	3.8	12.1	23.6	15.8	55.3	43.4	98.7	7.4	106.1
End Stock	.8	2.8	7.3	16.4	27.3	34.3	61.6	86.9	148.5
1988-89 Area	4.7	8.9	12.9	16.3	42.8	21.5	64.3	153.6	217.9
Prod	8.4	14.1	15.9	78.4	116.8	49.3	166.1	328.9	495.0
M Y Expt	4.0	11.3	12.4	20.6	48.3	38.6	86.9	11.0	97.9
J-J Expt	3.5	10.7	13.5	20.6	48.3	37.6	85.9	12.0	97.9
End Stock	.5	2.6	5.0	12.4	20.5	19.1	39.6	78.4	118.0
1989-90 Area	5.5	9.0	13.7	17.0	45.2	25.2	70.4	156.0	226.4
Prod	10.2	14.2	24.8	82.0	131.2	55.4	186.6	346.4	533.0
M Y Expt	6.1	10.8	16.9	21.3	55.1	33.6	88.7	13.8	102.5
J-J Expt	5.6	10.8	17.0	21.3	54.7	33.5	88.2	13.8	102.0
End Stock	.0	3.0	6.4	13.0	22.4	14.6	37.0	83.9	120.9
1990-91 Area	5.7	9.2	14.1	16.5	45.5	28.0	73.5	158.2	231.7
Prod	10.9	15.1	32.1	84.7	142.8	74.5	217.3	370.8	588.1
M Y Expt	5.6	11.8	21.7	20.7	59.8	29.1	88.9	15.6	104.5
J-J Expt	4.7	11.8	20.5	20.7	57.7	28.3	86.0	15.6	101.6
End Stock	.8	2.8	10.3	16.3	30.2	23.6	53.8	89.8	143.6
1991-92 Area	4.6	7.2	14.2	16.9	42.9	23.4	66.3	156.4	222.7
Prod	9.9	10.6	31.9	90.4	142.8	53.9	196.7	345.6	542.3
M Y Expt	5.8	7.1	24.5	21.9	59.3	34.9	94.2	14.9	109.1
J-J Expt	5.5	8.2	23.3	21.9	58.9	35.1	94.0	14.9	108.9
End Stock	.3	3.0	10.1	22.6	36.0	12.8	48.8	77.7	126.5
1992-93 Area	4.4	9.1	13.8	16.9	44.2	25.3	69.5	162.0	231.5
Prod	9.7	16.2	29.9	84.7	140.5	66.9	207.4	336.0	540.1
M Y Expt	5.5	10.8	20.5	22.0	58.8	36.9	95.7	13.3	109.0
J-J Expt	6.5	9.1	21.5	22.0	59.1	37.0	96.1	13.3	109.4
End Stock	.0	5.0	10.7	24.2	39.9	13.6	53.5	87.0	127.0
1993-94 Area	4.8	9.5	12.7	15.7	42.7	25.5	68.2	164.4	232.6
Prod	10.0	16.7	28.2	80.5	135.4	65.9	201.3	346.2	547.5
M Y Expt	5.3	11.0	18.0	19.0	53.3	30.4	83.7	11.9	95.6
J-J Expt	5.4	11.2	18.0	19.0	53.6	30.4	84.0	11.9	95.9
End Stock	.1	7.5	12.0	20.8	40.4	19.2	59.6	85.0	144.6
5 yr av yld	1.98	1.61	1.95	5.03	3.06	2.42	2.83	2.20	2.39
5 yr hi yld	2.19	1.65	2.28	5.36		2.66			
5 yr lo yld	1.79	1.49	1.23	4.54		2.20			
10 yr trend	1.90	1.51	1.90	5.10		2.50			

* EC data includes E. Germany

** incl. intra FSU trade: 87-8 5.0, 88-9 5.0, 89.0 5.0, 90-1 8.5, 91-2 0.7, 92-3 6.6,

Andy Bellingham 01043,04123,05273,06093,08103,10193,11113

LOWERING OF INTERNAL SUPPORT PRICES UNDER CAP REFORM, AND THIS WILL CONTINUE. THE EC HAS ALWAYS BEEN A PRIMARY SUPPLIER OF WHEAT TO RUSSIA/FSU, AND E. EUR. AND THE DECLINE OF THOSE MARKETS CAUSES THE EC TO LOOK ELSEWHERE.

S. HEMIS. CROPS WILL CONTRIBUTE MORE TO WORLD EXPORTABLE SUPPLIES THAN HAD BEEN EXPECTED A FEW MONTHS AGO DUE TO THE INCREASE IN AUSTRALIA. ARGENTINA'S PRODUCTION AND EXPORTS ARE DOWN SLIGHTLY FROM EARLIER ESTIMATES. BETWEEN THE TWO, EXPORTS ARE STILL NOT MUCH OVER 16 MLN MT.

CONCERNING STOCKS IN THE HANDS OF EXPORTERS. CANADA'S C/O WILL INCREASE AGAIN, EC STOCKS REMAIN HIGH, BUT WILL BE OFF FROM LAST YEAR'S RECORD, AND US STOCK LEVELS HAVE INCREASED.

US STOCKS OF WHEAT ARE NOT VIEWED AS THAT HIGH AND CERTAINLY NOT BURDENSOME, BUT THE US MKT HAS OPERATED WITH A MUCH TIGHTER SITUATION IN RECENT YEARS. THE QUALITY SITUATION MAKES THE STOCK ISSUE MORE INTERESTING IN THAT THOSE WHO HOLD QUALITY ARE VERY PROUD OF IT. PRICES ON QUALITY WHEAT HAVE MOVE UP STEADILY AND WILL CONTINUE TO DO SO. THE USDA NOW CAN BE MORE SELECTIVE AS PRICES MOVE HIGHER.

THE US-CANADA BILATERAL ISSUES CONTINUE TO BE OF INTEREST AND THE THREAT OF SECTION 22 ACTION AND A CLOSING OF THE BORDER HAS CREATED A LOT OF TALK. I DON'T THINK THERE WILL BE A CLOSING OF THE BORDER. THE PRE NAFTA VOTE PROMISE BY PRES. CLINTON OF TALKS WITH CANADA IS EXPECTED TO RESULT IN MEETINGS AFTER THE DEC. 15 GATT DEADLINE. SINCE THE HOLIDAYS THEN COULD MEAN A DELAY, THIS MIGHT NOT COME UNTIL JAN., BUT THE DEADLINE IS JAN. 16. THE US WILL SEEK SOME RESTRAINT BY CANADA ON SALES OF DURUM AND OTHER WHEAT INTO THE US, BUT US MARKET PRICES AND NEEDS MEAN THAT LARGE IMPORTS WILL CONTINUE.

THE AUDIT OF THE CANADIAN WHEAT BOARD'S PAST SALES TO DETERMINE IF SALES INTO THE US HAVE BEEN MADE AT LESS THAN ACQUISITION COST IS NOT EXPECTED TO SHOW ANYTHING MAJOR EXCEPT POSSIBLY SOME LOW PRICED SALES IN EARLY 1990. CANADIAN INITIAL PRICES HAVE BEEN LOW ENOUGH TO MAKE SALES TO THE US WORK WELL. THE US WILL CONTINUE TO INSIST THAT THE ACQUISITION COST AS DEFINED BY THE PANEL IS UNREALISTIC SINCE VARIOUS COSTS RELATING TO QUALITY INSPECTION AND WEIGHING NORMALLY INCLUDED IN ANY TRADE COMPUTATION HAVE NOT BEEN INCLUDED.

THE CRUX OF THE MATTER IS THAT THE US IS CANADA'S MOST ATTRACTIVE MARKET FOR DURUM, FEED WHEAT, BARLEY AND OATS, CANOLA AND OIL. US MARKET PRICES HAVE BEEN HIGH ENOUGH TO CONTINUE TO ATTRACT CANADIAN SUPPLIES. EEP EXPORTS OF DURUM AND BARLEY ADD TO THE DILEMMA FOR THE US BY KEEPING MARKET PRICES HIGH AND THEREBY INCREASING IMPORTATION. THIS YEAR THE TIGHT FEEDGRAIN SITUATION IN THE US MAKES IMPORTS OF FEED WHEAT AND BARLEY PARTICULARLY ATTRACTIVE, AND CANADIAN SALES SINCE EARLY NOV. HAVE INCREASED.

IF NO REASONABLE SETTLEMENT IS REACHED IN THE 60 DAY PERIOD THE

ISSUE OF WHETHER DURUM IMPORTS DAMAGE AND RAISE THE COST OF THE US DOMESTIC FARM PROGRAM WILL BE INVESTIGATED BY THE ITC. THAT WOULD MEAN THE RESOLUTION WOULD BE DELAYED UNTIL APRIL-JUNE.

CANADA'S WGTA RAIL SUBSIDY OF 18-19 DLRS CAN. ON THE MOVEMENT OF GRAIN WESTWARD HAS ALWAYS BEEN PART OF THE CANADIAN/US DISPUTE. THE PREVIOUS CANADIAN GOVT. PLANNED TO SHIFT THE PAYMENT FROM THE RAILROADS TO A PAYMENT DIRECTLY TO FARMERS WHICH WOULD NOT BE CONSIDERED A SUBSIDY BY GATT. THE NEW GOVT. HAS SAID IT WILL REMAIN WITH THE STATUS QUO, BUT A GATT AGREEMENT WOULD REQUIRE A STEPPED REDUCTION IN THIS SUBSIDY. A SWITCH TO PAYMENT TO FARMERS INSTEAD OF THE RAILROADS WOULD MEAN A LOWER COST ON CANADIAN GRAIN WHICH WOULD PROBABLY MEAN GREATER SHIPMENTS INTO THE US.

MEANWHILE CANADA HAS COMPLAINED ABOUT EEP TO MEXICO. THE USDA ANNOUNCED EEP TO MEXICO IN RESPONSE TO INCREASED SALES OF CANADIAN WHEAT TO MEXICO AT THE EXPENSE OF US MARKET SHARE. CANADA SAYS THE US DIDN'T TAKE ITS INTEREST INTO CONSIDERATION WHEN IT ANNOUNCED EEP, AND THE USDA REPLIES THAT CAN. HAD NOT CONSIDERED US INTEREST AS IT INCREASED ITS MARKET SHARE.

THE RUSSIAN/FSU CREDIT AND DEMAND SITUATION IS A BIG UNKNOWN. WE ALL ASSUME THAT RUSSIAN WILL RECEIVE GOVT. CREDITS FROM THE US, EC, AND FRANCE, BUT THIS IS NOT EXPECTED TO OCCUR UNTIL JAN.-FEB. AT THE EARLIEST. GERMANY ANNOUNCED A 3.5 BLN MARK HERMES LINE FOR 94 (350 MLN CAN BE USED IN 93) WHICH IS THE FIRST NEW W. CREDIT, AND FRANCE JUST FREED UP AN OLD LINE FOR 1.5 BLN FRANCS THAT HAD BEEN BLOCKED. BOTH ARE FOR INDUSTRIAL PRODUCTS, BUT INDICATE RUSSIAN PAYMENTS ARE ON SCHEDULE AND THAT CREDITS ARE BEGINNING TO BE MADE AVAILABLE.

RUSSIA HAS NOT MADE SPECIFIC REQUEST TO THE US FOR NEW GSM CREDITS, BUT THE USDA IS EXPLORING COURSES OF ACTION. THE US IS EXPECTED TO WAIT UNTIL THE END OF DEC. PAYMENT IS MADE, AND CONGRESSIONAL HEARINGS IN JAN.-FEB. ARE ANTICIPATED. CERTAINLY A CLEAR CONGRESSIONAL CONCURRENCE WILL BE NECESSARY. THE RESULTS OF THE RUSSIAN DEC. 12 ELECTION WILL BE WATCHED. ALSO PRES. CLINTON PLANS TO VISIT MOSCOW IN JAN.

THE POLITICS OF CREDIT AND ASSISTANCE FOR RUSSIA/FSU IS DIFFERENT NOW. BEFORE THERE WAS A PERCEIVED NEED. TWO YEARS AGO THE WEST THOUGHT THAT FOOD SHORTAGES WERE IMMINENT, SOME OF THAT FEELING CARRIED OVER IN THE LAST SEASON AND, ALONG WITH ELECTION YEAR POLITICS, THE RESULT WAS THE BIG FOOD FOR PROGRESS PL 480 PACKAGE. ALSO, LAST YEAR THE US HAD A 9.4 CORN CROP AND ALMOST A 2.5 BEAN CROP, AND EXPORT OUTLETS WERE NEEDED. THIS YEAR THE SHORT CORN CROP AND SMALLER SOY HARVEST REVERSES THAT.

BY EARLY IN 94 FRANCE AND THE EC ARE ALSO EXPECTED TO BE DISCUSSING RUSSIAN CREDITS. HOW MUCH US AND EUROPEAN GRAIN IS SOLD TO RUSSIA WILL BE A IMPORTANT MARKET FACTOR ESPECIALLY FOR CORN AND MEAL, BUT ALSO FOR WHEAT.

RUSSIAN BUYING WILL BE MORE IMPORTANT IN CORN AND MEAL THAN IN WHEAT, BUT CHINA MEANS WHEAT. AS MENTIONED EARLIER, CHINA'S IMPORTS SO FAR IN 93-4 HAVE BEEN A DISAPPOINTMENT, BUT THEY ARE EXPECTED TO BUY ADDITIONAL WHEAT FOR 93-4. THIS IS EXPECTED TO INCLUDE US AND CANADIAN WHEAT., AND PROBABLY SOME AUSTRALIAN. SINCE MOST ESTIMATES OF CHINESE BUYING HAVE BEEN REDUCED I SUPPOSE THERE IS A CHANCE OF A SURPRISE DUE TO LARGER THAN EXPECTED BUYING, BUT THAT SEEMS MINIMAL NOW. ANY CHINESE BUYING WILL BE WELCOME.

THE USDA IS WORKING TO SETTLE THE OLD TCK PROBLEM WITH CHINA AND IT APPEARS THAT THERE IS A BETTER CHANCE FOR THAT THAN IN PAST YEARS. THE TARGET FOR RESOLVING THIS IS THE END OF DECEMBER.

I HAVE TO BE AN OPTIMIST CONCERNING A GATT AGREEMENT DEC. 15. THE BLAIR HOUSE AGREEMENT OF LAST YEAR REMAINS A STUMBLING BLOCK FOR THE EC. UNDER THAT AGREEMENT THE EC WOULD BE REQUIRED TO REDUCE WHEAT AND FLOUR EXPORTS TO 16.4 MLN MT IN THE FIRST YEAR. THIS YEAR THE EC WILL EXPORT ABOUT 19 AND LAST YEAR EC EXPORTS WERE 22.0. THE EC WANTS TO LESSEN THE FIRST YEAR IMPACT AND ALSO GAIN A MEANS OF RIDDING ITSELF OF ITS VERY LARGE INTERVENTION STOCKS WHICH WILL AMOUNT TO ALMOST 21 MLN MT AT THE END OF THIS SEASON. SO FAR THE US HAS RESISTED OPENING UP THE BLAIR HOUSE AGREEMENT TO CHANGES. THE EC'S DESIRE TO GAIN AN EXTENSION OF THE PEACE AGREEMENT BEYOND THE TRANSITION PERIOD OF SIX YEARS MAY BE OBTAINABLE, BUT NOT AS AN OPEN ENDED ASSURANCE.

PLEASE REMEMBER THAT EXPORT SUBSIDY PROGRAMS SUCH A EEP DO NOT END WHEN A AGREEMENT IS REACHED, OR EVEN BY THE END OF THE TRANSITION PERIOD, BUT ONLY BEGIN TO BE SCALED BACK.

FEEDING OF WHEAT WILL BE UP SHARPLY THIS YEAR AND I HAVE HEARD SOME ESTIMATES OF 350-400 MLN BU IN RECENT WEEKS. LAST SEASON 196 WAS FED, AND THE HIGH WAS 499 IN 1990-91. MUCH WILL DEPEND ON THE LEVEL OF FEED WHEAT IMPORTS FROM CANADA. THE USDA ESTIMATED RECORD IMPORTS OF 85 MLN BU IN THE LAST S AND D, AND THAT IS EXPECTED TO MOVE UP.

LOOKING OUT TO THE NEW CROP, ONE THING THAT SEEMS CERTAIN IS THAT QUALITY SHOULD BE IMPROVED IN THE US, CANADA, AND EUROPE. US WINTER AREA SHOULD BE UP SLIGHTLY, BUT NO BIG CHANGE IS EXPECTED. MOISTURE CONDITIONS ARE FAVORABLE. THE PRICE INCENTIVE WILL BE MORE A FACTOR FOR US SPRING WHEAT AND THAT APPLIES TO CANADA AS WELL.

FOR THE PAST FEW MONTHS ALL GRAIN MARKETS HAVE BEEN STRONG LED BY THE TIGHT SITUATION IN CORN, BEANS, AND QUALITY WHEAT. THE BEARISH IMPACT OF THE WEAK WORLD DEMAND SCENARIO HAD BEEN FULLY DIGESTED IN THE MARKET BY EARLY FALL AND THE WHEAT QUALITY SITUATION HAS CAUSED THE SPRING AND HARD WHEAT MARKETS TO WIDEN PREMIUMS OVER CHICAGO.

THE SUPPLY SIDE IS KNOWN AND BIG PREMIUMS FOR QUALITY WHEAT HAVE BECOME THE RULE. THAT SITUATION WILL BE WITH US UNTIL NEW CROP,

AND THE OCCASIONAL AND UNUSUAL DISTORTIONS IN BOTH DOMESTIC AND EXPORT MARKETS WILL BECOME MORE COMMON IN THE US, CANADA AND EUROPE AS THE SEASON WINDS DOWN. AS PRICES HAVE MOVED UP STEADILY THIS FALL, SELLERS THAT WERE WILLING DISCOUNTERS EARLIER IN THE SEASON, ARE NOW MUCH MORE HESITANT.

IN CONCLUSION, THE PERCEPTION IS THAT THERE IS LITTLE PRICE RISK ON THE DOWNSIDE. WITH THAT IN MIND SURPRISES ON THE DEMAND OR SUPPLY SIDE ARE LIKELY TO ADD TO THE PRICE STRENGTH.

Outlook '94

For Release: Wednesday, December 1, 1993

OUTLOOK FOR DAIRY

James Miller
Section Leader, Dairy Analysis
Economic Research Service

Larger milk production, stagnant commercial use of skim solids, and large stocks at the start of 1994 are expected to result in considerably lower -- but more stable -- 1994 milk prices. Unlike most of the 1989-93 period, a sizable surplus of both skim solids and milkfat is likely.

Milk production was one of the few stable aspects of the dairy industry in 1993. Prices were on a roller coaster as traders attempted to gauge the effects of falling commercial use and high stocks of skim solids, jumping commercial use and low stocks of milkfat, brisk activity under the Dairy Export Incentive Program (DEIP), feed worries, and an erratic economic recovery. In 1993, farm milk prices will average about 3 percent below 1992 but well above 1991.

Milk Production

Structural adjustment in milk production seemed to accelerate in 1993, even though the causes were mostly longrun. Milk cow numbers fell in parts of the Midwest, as more producers quit dairying and few expanded. Meanwhile, production grew rapidly in the west, as established producers expanded and were joined by new producers. However, structural change was not a simply east-west pattern. Cow numbers held about steady in the Northeast and were down only slightly in southern regions and most of the Midwest.

Decreases in milk cow numbers from a year earlier widened as 1993 progressed. Changes in cow numbers did not appear to be altered by the ups and downs of milk prices during the year. The pressure of longterm declines in milk prices on producers whose productivity gains have not kept pace with those of other producers seemed to play a larger role. Average milk cow numbers in 1993 will be slightly more than 1 percent below 1992.

Milk per cow in 1993 will total only slightly more than 1 percent above 1992. Producers have been conservative about boosting concentrate feeding, even though milk-feed price ratios were modestly favorable. Even so, expansion in milk per

cow was actually fairly impressive, because it was from the very strong, weather-boosted level of 1992.

Milk production posted small gains during the first half of 1993 but fell below a year ago in late summer. Output is projected to be about 152 billion pounds, essentially the same as 1992.

The keys to 1994 production are continued structural changes, feed quality and prices, and bovine somatotropin (bST). Expected lower milk prices probably will keep pressure on weaker producers. Milk cow numbers are expected to be more than 1 percent below a year earlier throughout 1994. However, the declines may lessen during the year as a more normal share of producers start to expand.

This year's sodden Midwest crops are expected to cause a 5-8 percent rise in 1994 concentrate costs. Combined with lower milk prices, higher feed prices are projected to drop the milk-feed price ratio to a relatively low level of less than 1.5, compared with about 1.65 in 1993. Under normal conditions, this milk-feed price ratio would be expected to result in below-trend growth in milk per cow.

Midwestern forage quality was spotty, although major problems were not general. Significant amounts of poor forage and little top quality forage will make feed management challenging. Some areas will also have to cope with low quality corn.

The first bST product was cleared recently by the Food and Drug Administration and will be available for sale in early February. bST will boost the production of treated cows and can lower costs per cwt. However, a farmer stampede to buy bST is unlikely. Most farmers are by now aware that use of bST requires very careful management. In addition, the possible milk marketing problems of milk from bST treated cows may cause some producers to hesitate.

The relatively low milk-feed price ratios will lessen the incentive to use bST. In addition, forage problems may hold back some farmers. Even so, we project that more than a tenth of the cow herd will have been treated by yearend.

Milk per cow in 1994 is projected to grow more than 2 percent, with considerably larger gains by late 1994. This would result in about a 1-percent rise in milk production for the year. However, all projections will be subject to great uncertainty until the industry's reaction to bST becomes evident.

Stocks

Commercial stocks of milkfat have been fairly stable at moderate levels throughout 1993, mostly because of low butter holdings. Milkfat stocks in 1994 may run a little higher, after this year's holdings proved insufficient for tight second-half cream markets.

Weak sales of skim solids pushed commercial stocks to very high midyear levels. Nonfat dry milk holdings were excessive, and cheese inventories were high. Sales of nonfat dry milk to the Government and DEIP exporters have reduced, and will

continue to trim, these stocks. However, skim solids stocks probably will be relatively large at yearend, adding to 1994 supplies.

Commercial Use

Demand for dairy products was generally weak in 1993, as the erratic recovery in the economy was not reflected in dairy markets. Although retail dairy prices were relatively favorable, growth in cheese use has been considerably slower than normal and fluid milk sales have fallen. Commercial use of most other products has been stagnant.

The aggregate commercial disappearance data were dominated by massive shifts in cream and skim milk markets. This year's butter sales will exceed 1 billion pounds for the first time since the mid-sixties, and residual uses of cream (including changes in products with variable content) have grown. Commercial disappearance, milkfat basis, is projected to rise 2-3 percent.

Commercial disappearance of nonfat dry milk dropped back to the levels of the mid-eighties, even though prices favored use of powder to supplement milk for cheese. Residual use of skim milk also was lower. On a skim basis, commercial use of all products is expected to fall 1 percent in 1993.

The dramatic divergence of the milkfat and skim solids markets should be considered mostly a long-delayed response to the steady shifts of milk's value from cream to skim milk. Adjustments probably are not yet over, although 1993 may have seen the largest divergence.

Commercial use in 1994 is expected to firm on the basis of economic growth and favorable dairy prices. Skim-basis sales are expected to stabilize, while disappearance of milkfat is projected to expand 1-2 percent.

Net Removals

The shifts in 1993 commercial use substantially narrowed the gap between the milkfat surplus and the skim solids surplus. Net removals of butter were large during the first half. But, net removals have been negative since August, when sales back to the industry began. On the other hand, net removals of nonfat dry milk have been substantial throughout 1993. Only small purchases were made, but DEIP removals have been steady. Only small removals of cheese have been made.

Support purchases of both butter and nonfat dry milk are likely after holiday needs have been met. For all of 1993, removals of milkfat are projected to decrease 2-3 billion pounds, milk equivalent, from 1992's 10 billion. Skim solids removals are expected to rise about 3 billion pounds, milk equivalent, from 2 billion a year earlier.

The 1994 surplus is projected to be between 6 and 7 billion pounds milk equivalent, regardless of measure. The surplus of skim solids may exceed the milkfat surplus for the first time since 1987.

Prices

Wholesale prices of cheese and nonfat dry milk have been volatile in 1993 and have shown at best a rough correspondence to each other and to a normal seasonal pattern. Cheese prices started low, jumped in March-April, fell in June-July, jumped again in September, and have been holding on since then. Meanwhile, nonfat dry milk prices started strong, dipped in March, rose again in April, fell along with cheese prices in June-July, and started to pick up in October-November. Markets seemed to have difficulty coping with the price effects of DEIP, rapid shifts in domestic use, and the loss of manufacturing flexibility caused by regional shifts in milk production.

Butter prices have been fairly stable during 1993, even though the support purchase price was lowered in July. During the first half, large purchases kept butter prices near the support purchase price. Since August, tight cream markets have kept prices near the now-lower Government sell-back price.

Manufacturing milk values also were volatile. The Minnesota-Wisconsin (M-W) price of manufacturing grade milk jumped almost \$2 per cwt between February and May, fell more than \$1 by August, and almost regained the May peak in October. The M-W price probably will be falling as 1993 draws to a close.

Farmers will receive an average of about \$12.80 for their 1993 milk, down about 3 percent from 1992. Milk prices were below a year earlier during the first and third quarters and near a year earlier during second and fourth quarters. Farm milk prices held up surprisingly well in light of the rising surplus of skim solids.

Milk prices in 1994 are projected to fall to the \$12 vicinity, as the surplus of both milkfat and skim solids is expected to be sizable. However, extraordinary uncertainty about both supply and demand conditions may make a mockery out of any price projections. Quite plausible scenarios could generate prices \$1 or more either higher or lower.

Retail dairy prices have been near a year earlier during most of 1993. The annual average will be up less than 1 percent, well behind rises in the prices of all food or of all items. Retail dairy prices are projected to be about steady in 1994.

International market prices drifted lower as 1993 progressed. A stronger U.S. dollar, slightly larger export supplies from the European Community, stronger output in Oceania, and lackluster import demand all contributed to slipping prices. In 1994, international market prices are expected to stabilize but remain soft.

In Conclusion

In years to come, 1994 may be noted as the start of a bST era. However, the key factors in 1994 dairy markets are likely to be more traditional. Structural adjustment, shifts in commercial use, feed supplies and prices, and stocks probably will shape the course of the dairy industry next year.

Outlook '94

For Release: Wednesday, December 1, 1993

FUTURE PROSPECTS FOR THE MIDWEST DAIRY INDUSTRY

Ken Bailey
Extension Commercial Agriculture Dairy Economist
University of Missouri

I. Introduction

Good morning! Thank you for the opportunity to participate in this conference and address a topic that is of great interest to me. Let me say right from the start that I will be discussing the subject of Midwest competitiveness in the U.S. dairy industry from a personal point of view. Rather than using published studies and data sets to make my points, I will be drawing from my own personal experiences working individually with dairy farmers from the state of Missouri. I will make the assumption that the lessons I've learned in Missouri will be applicable to the rest of the Midwest.

There are a great number of individuals that are concerned with the future competitiveness of the Midwest dairy industry given the rapid growth of large and efficient production units in the Western and Southwestern regions of the U.S. (hereafter referred to as the West). These units are unlike the traditional dairy farms of the Midwest in that they are large, highly specialized, and well financed. Given an outlook of less government intervention and a greater reliance on market forces, the concern is that the smaller size dairy farms in the Midwest are at a competitive disadvantage and will continue to lose market share to the West.

This topic is of great concern to me. I was hired as part of a multidisciplinary extension team whose sole purpose was to increase the competitive position of the Missouri dairy industry. Our team is funded by an annual grant of \$250,000 from the Missouri General Assembly. We have just completed a 2-year study in which we designed 500 and 300 cow units for Missouri that we feel are competitive with the large dairies in the West. We call this study the Missouri Dairy Plan. In this study we evaluated all aspects of dairy production: housing and equipment, waste management, herd health, nutrition, and economics.

Our conclusion, which we believe is applicable to the rest of the Midwest, is that we can compete with the West if we adopt more modern business principles and exploit our

comparative advantages. But the bigger question, however, is how will we move from traditional size units of 50-80 cows to larger, more efficient units. That will require working with Midwest dairy farm families that are willing to acknowledge market realities, embrace profit-enhancing technologies, adopt modern business and management principles, and take on greater risk. Our Commercial Agriculture Extension Program focuses specifically on those producers willing to meet the challenges of the future and make the necessary changes.

II. Why Aren't We Competitive?

When trying to assess our competitive position it's easy to start finger pointing and to be critical of the folks that our markets rely on so heavily: our dairy producers. That's unproductive and is not what I want to do here. A better approach is to do some real soul searching to identify our strengths and weaknesses, and to look where we can do better. Once those opportunities are identified, many dairy producers will make the necessary changes.

But before we get to specific recommendations, let's identify some of the Midwestern customs and traditions that I believe adversely affect our competitive position:

- 1) having diversified enterprises in order to be more self-sufficiency
- 2) small production units that have an investment per cow greater than \$5,000
- 3) labor limited to what can be provided by the family
- 4) viewing the farm as a way of life, and/or as a hobby, not as a business
- 5) lack of adequate production and financial record keeping and interpretation

Now I call the above 5 points traditions because they are prevalent production practices that in my view are not well grounded in basic business principles. One tradition that needs changing is the idea that each dairy farm must be self-sufficient in forage and grain production. The idea is that we're in the Midwest, right, so why not produce the forage and grain needed by the dairy enterprise. Why not make money on a cropping enterprise too! That way, you aren't dependent on the market to provide these necessary inputs. But there are two major short comings to this tradition.

First, cropping enterprises draw management, labor, and capital away from the dairy enterprise (often the more profitable enterprise). Midwest dairies could be much more profitable if they would specialize and focus more of their resources on milk production. We have excellent dairy producers that could be even better if they didn't have to spend so much of their time and talents also being crop farmers.

Second, the quality of the forage that is raised on a dairy farm is often of lesser quality than what can be purchased from the market. If you are dairying in a corn producing region, why not contract with local growers to have your silos filled instead of raising it yourself. A

market for high quality silage as well as haylage can develop if there is a demand. Also, premium quality hay can be purchased already from the market (the current year is an exception).

The problem with raising average to poor quality forage on the dairy farm is that this feed greatly reduces feed intake and therefore milk production. The single most important objective of any dairy farm should be **PRODUCTION, PRODUCTION, PRODUCTION**. If you aren't making 20,000 pounds of milk per cow, then you can be doing better. Higher production per cow should be the number one goal of every dairy farm.

Another tradition in the Midwest is the small size of our production units. The smaller the unit, the larger the investment per cow. The problem here is that if you have a debt per cow greater than \$2,000, you will have problems cash flowing the operation. The other problem of course is that there is a limited opportunity to negotiate lower hauling charges and to purchase inputs in volume at discounted prices. Also, it's difficult to justify investments in feeding systems that take advantage of lower-priced alternative feeds without a larger cow population.

A final tradition that limits our competitiveness is the view that the farm represents a way of life that should be protected from market forces. This is the most difficult attitude to deal with but must be met head on. The reality is that the government is getting out of the business of protecting small and high cost farms. My guess is that we will not have a return to higher support prices and we won't have a two-tier pricing policy. Both of these policies cost the government and/or consumers too much money. Instead, we will have a domestic market that will decide who will prosper and who will fail. In this market place is the consumer who only cares about quality and low prices. Consumers don't care if their milk is supplied locally, or if it comes from 2,000 miles away. What does this mean for the small Midwest dairy producer? It means that we will have to learn to compete, or be forced out of the market. Today's market is very unforgiving to high cost producers.

III. Can We Compete?

Now there are many that will disagree vehemently with my assertions that we are not competitive. They will argue that the Midwest doesn't have a level playing field. Others will say that the West has weather conditions that are more conducive to milk production, higher milk prices, more available capital, etc. As with most arguments, there are some truths and some half truths.

The Midwest does have a competitive disadvantage in weather. Cold winters and humid summers require greater investments in housing and waste management systems when compared to the West. The per cow costs of a paddock system with shades can't compare with that of freestall housing in the Midwest. But the argument that the Midwest has lower

milk prices than other regions of the U.S. and that this explains regional production shifts is a poor one. Milk prices so far this year in California and New Mexico--two rapidly growing dairy states--have been well below prices in Wisconsin (see Figure 1).

But the Midwest has many advantages that can be successfully exploited in the future. These include:

- 1) availability of water
- 2) availability of a good labor supply
- 3) proximity to grain and forage supplies
- 4) rural space and a rural population amenable to large-scale dairies
- 5) low cost land

These are just a few of the reasons why Premium Standard and Murphy Farms are relocating large-scale hog operations to northern Missouri. I believe the Midwest has tremendous untapped resources available to the dairy industry.

Table 1 illustrates an economic comparison between the 500 cow unit developed in the Missouri Dairy Plan, and data from the accounting firm of Genske, Mulder & Company for dairy farms in California, Idaho, Washington, and Central Texas. The cost and returns are calculated on a per hundredweight basis. Some of the estimates from the Missouri Dairy Plan don't directly compare item for item with that of the data from Genske, Mulder & Company. We calculated herd replacement costs differently and included cost and returns for some minor cropping enterprises. But the net income figures are comparable and indicate that the 500 cow unit in Missouri is competitive with larger production units in the West. The point is, **WE HAVE THE POTENTIAL TO COMPETE!**

You see, if production is an important measure of competitiveness, then there are already dairies in the Midwest competing very effectively with the West. The economic model that we developed for the Missouri Dairy Plan showed over and over again that production was the key to financial growth. Even with our higher investments for housing and lagoons, returns on assets were 10.5% for the 300 cow unit and 14.5% for the 500 cow unit. That's pretty good returns! In addition, the model also showed that a 2,000 pound increase in milk production per cow had the same financial implications on net cash flow as a \$1.20 increase in the milk price. Dairy farmers can control production per cow, but as an individual, they have no effect on milk prices.

IV. A Recipe for Change

Nothing makes Midwest dairy farmers madder than to hear an ag economist from a university say that the key to better financial returns is simple: just get bigger! Such statements assume that our dairy farmers aren't smart enough to figure this out on their own.

But it really suggests that the person making such statements is spending way too much time behind the computer. Well the fact is, dairy farmers already know that they need to get bigger. The real challenge is to tell them how much bigger they need to be, and how to get there.

Some of my recommendations in this regard are as follows:

- (1) **Keep better records!** Too many farms I visit don't have the kind of records needed to make basic management decisions. The shoe box will no longer work! By records I mean financial and production records. Sign up with DHIA and have them keep records for you. As for financial records, there are many choices available today ranging from hiring an accountant, to buying affordable financial software packages. The point is, it's almost impossible to improve your business without records.
- (2) **Focus resources on the dairy enterprise.** For many dairy producers, this may entail selling off land and equipment and reinvesting the proceeds into the dairy enterprise. This will result in a more profitable business if the added capital will help you to improve your rolling herd average.
- (3) **Look at the farm as a business.** If you get bigger and run out of family labor, hire more labor. Scrutinize every investment and ask yourself what the returns will be. You may be better off, for example, putting your money into more commercial grade cows and better feeding systems than in investing in, say, expensive semen and pure bred cows. My point is, think like a business person!
- (4) **Embrace new and profitable technologies.** New technologies like BST afford producers an opportunity to expand milk production without expensive investments in housing and waste handling systems. Other technologies to look at include total mixed rations, freestall housing, modern waste handling systems, artificial insemination, etc.

But my best recommendation is:

Accept the market as it is!

This represents the biggest obstacle to a better standard of living for our Midwest dairy farm families. Accepting this is the first step toward revitalizing yourself and your farm to better meet the market challenges ahead. A major restructuring must take place in the Midwestern dairy industry and that must start with the individual dairy producer. The Midwest must accept the changes that have taken place in the U.S. dairy industry and change accordingly.

V. Which Way Will We Go?

I have been asked to predict how the Midwest will respond to the restructuring that has taken place in the U.S. dairy industry. As I see it, the Midwest is at a defining moment and must choose its' fate now. I will hypothesize two scenarios.

Worst case scenario. Under this scenario, the Midwest rejects the notion that the market has changed. Producers will continue current traditions and production practices. Exits of high cost producers will continue as people retire or are forced off the farm. Milk production from these farms will not be offset with higher production from other units. As a result, the market share of the Midwest will continue to erode.

Best case scenario. Midwest producers will accept the fact that the market has changed and will take progressive steps to meet the challenge. Producers will demand better management training and education from University Extension and the private sector. The Midwest will essentially "retool" and "reinvest" not only in cows, buildings and equipments, but also in people. Good managers, not hard workers, will decide the future of our industry. Dairy producers will demand better goods and services at a lower cost from those private sector industries that service the dairy industry. The future of these allying industries is dependent on the prosperity of the Midwest dairy industry.

If I were to gamble which option was most likely, I would guess that the Midwest dairy industry will accept the challenge and begin a major restructuring. Such restructuring will take time though, perhaps as much as 5-15 years. But in some cases, it has already begun. There are many examples of competitive Midwestern dairy producers that should act as role models for the future of our industry. The key will be to develop educational programs that will provide our producers with the management skills required to take the quantum leap to a more profitable size.

Table 1. Comparison of the Missouri Dairy Plan to Actual Farm Data

	California ^a	Idaho ^a	Washington ^a	Central Texas ^a	Missouri Dairy Plan ^b
Average Dairy Data					
Number milking cows (hd.)	1,130	911	870	977	500
Daily production/cow (lbs.)	60	58	65	65	58 ^c
Herd turnover rate (%)	34	35	27	34	35
Income (\$/cwt.)					
Milk	\$11.47	\$12.02	\$12.07	\$13.29	\$12.52 ^d
Calves	.15	.15	.30	.48	.66
Other	<u>.15</u>	<u>.02</u>	<u>.20</u>	<u>.02</u>	<u>1.55^e</u>
Total Income	\$11.77	\$12.19	\$12.57	\$13.79	\$14.73
Expenses (\$/cwt.)					
Feed	\$ 5.37	\$ 4.40	\$ 5.08	\$ 5.82	\$ 5.64
Other variable costs	2.08	2.92	2.86	2.72	4.69 ^f
Herd replacement costs	.96	1.10	.86	1.62	.91
Other fixed costs	<u>2.17</u>	<u>2.45</u>	<u>2.01</u>	<u>2.55</u>	<u>2.21</u>
Total Costs	\$10.58	\$10.87	\$10.81	\$12.71	\$13.45
Net Income (\$/cwt.)	\$1.19	\$1.32	\$1.76	\$1.08	\$1.28

^aSource: **Dairy Income and Expense Averages**, Genske, Mulder & Company, June 30, 1993.

^bSource: **Missouri Dairy Plan**, Commercial Agriculture Program, Extension Manual 155, 1993.

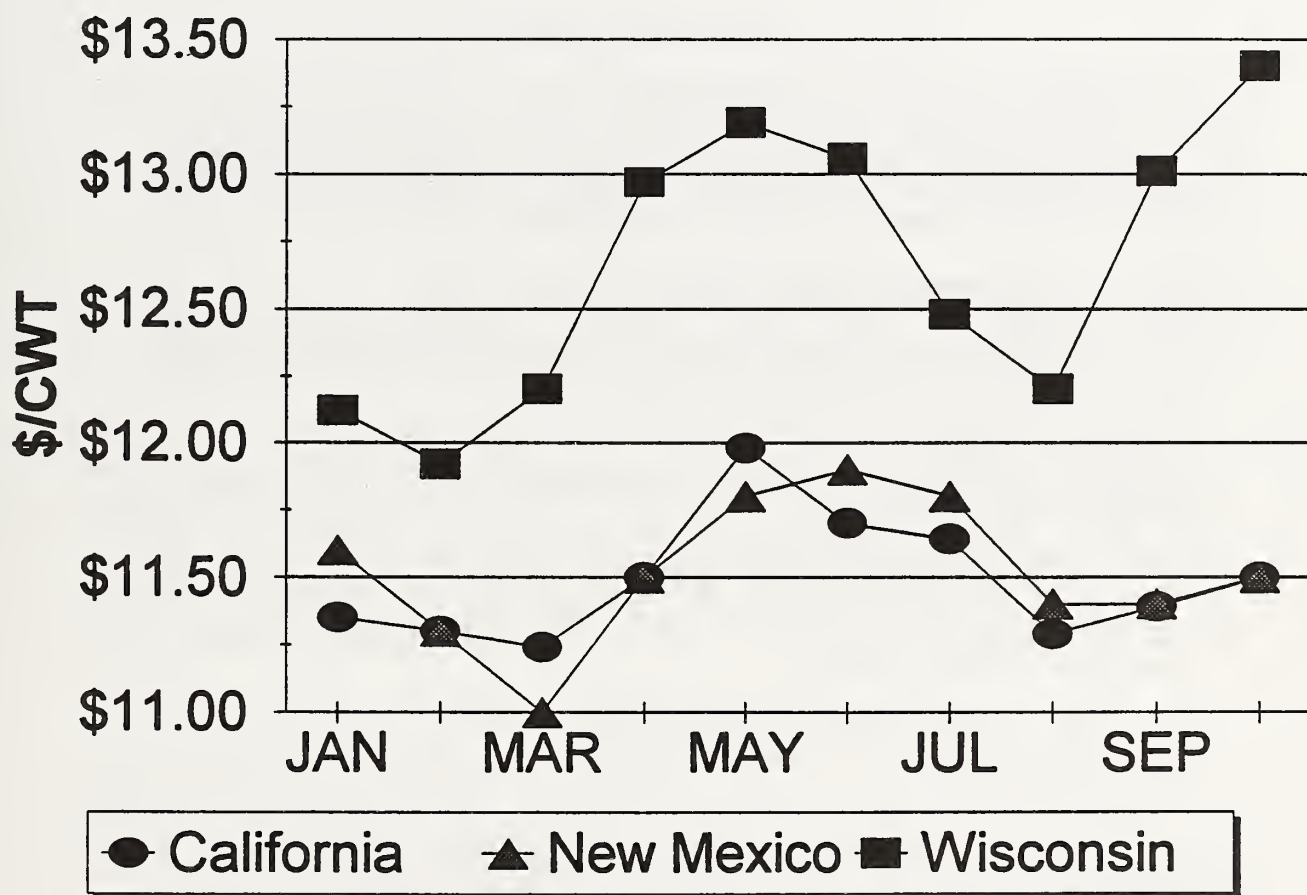
^c20,000 lb. RHA with 345 days in milk.

^dAverage Missouri all-milk price for the months January-June, 1993.

^eIncludes 58 cents for the value of crop production and 97 cents for cull income.

^fIncludes some cropping expenses.

Figure 1. 1993 All-Milk Prices



Outlook '94

For Release: Wednesday, December 1, 1993

FOREST PRODUCTS OUTLOOK

Henry Spelter
Timber Demand and Technology Assessment
USDA, Forest Service, Forest Products Laboratory¹
Madison, Wisconsin 53705-2398

General Economic Trends

When the 1994 budget was unfolding, two contrasting opinions about the economic outlook were voiced. One viewed the effects of the budget's tax increases and spending cuts as restrictive, causing the economy to slow or stagnate. The other viewed the lower interest rates, stemming from reduced deficits and stable inflation, as providing the thrust for an economic rebound that would offset any drag from fiscal policy.

How have these views been affirmed or negated by events in 1993?

- Long-term nominal interest rates have fallen to levels last experienced in the 1960s.
- Inflation has moderated to a range of 2% to 3%.
- Residential construction has revived, fulfilling its traditional role of drawing the economy back from recession.
- A strong automobile sector has lifted industrial production.
- Orders for durable goods have been consistently higher than 1992 levels, indicating more robust consumer spending.
- Gross domestic product (GDP) growth has risen steadily from a feeble 0.7% rate in the first quarter of 1993 to 2.8% in the third. An even stronger rate of growth is expected in the fourth quarter (Fig. 1).

One area of weakness has been the labor market, where job growth has been relatively slow and the unemployment rate has remained high. Many companies, unable to raise prices in a sluggish rebound, have invested heavily in labor-saving technology and/or have reduced their workforce to improve productivity and cut costs. Growth in manufacturing jobs has been notably weak.

¹The Forest Products Laboratory is maintained in cooperation with the University of Wisconsin. This article was written and prepared by U.S. Government employees on official time, and it is therefore in the public domain and not subject to copyright.

The debate about the effects of the administration's fiscal policies is continuing. However, as we approach 1994, the following signs indicate that economic growth will gain momentum:

- An expansive monetary policy and continued low interest rates. Throughout 1993, monetary policy has been stimulative as indicated by the growth in the monetary base. While long-term rates may not fall below the 1993 low, the continued prospects for moderate inflation and an economy that is well within its limits should support interest rates at comfortably low levels.
- Improved consumer and business balance sheets. The reduced interest burden, coupled with refinancing and slower borrowing, has reduced the proportion of income and earnings that must be set aside to service debt. This has set the stage for future increases in consumption and investment spending as consumer cash flows improve.
- Improved prospects for job growth. In response to the increasing demands for goods, firms are hiring more workers rather than scheduling overtime.
- A booming stock market and capital spending surge. The stock market is signaling the growth in economic strength. The surge in business investment spending also points to confidence about the future. As economic gains become evident, the momentum generated will become self-reinforcing, encouraging people to spend on discretionary, large-ticket items that they might have hesitated to buy before.
- A strengthening economy worldwide. Potential worldwide demand is growing as East Europe, the former USSR, Latin America, and especially the far East and China have adopted economic policies oriented toward the free market. In Europe, to the extent that falling interest rates stimulate recovery, the demand for American goods will increase.

In this context, the relatively restrictive budget, coupled with an accommodating monetary policy, could benefit the economy in the long run by helping to avoid business cycle extremes. The stage may be set for a period of sustainable economic growth, resembling the 1950s during the Eisenhower era, when restrained government fiscal policies set the tone for moderate demand growth while an accommodating monetary policy provided the low interest rates to fuel investment. Another parallel to the 1950s is found in demographics. Population growth is occurring mainly in the middle-age groups, which have high disposable income and savings.

Housing Trends

Housing provides the focal point for many wood products. Housing demand is driven principally by population growth (demographics) and credit market conditions.

The growth in population among younger adults has slowed within the past decade. As a result, the annual number of new households has been declining—from about 1.5 million in the 1970s to 1.0 million in the 1990s (Fig. 2). For another decade, this trend will put a damper on housing demand. Nevertheless, in the near term, households who postponed buying a home in the eighties because of high costs are now buying housing. This back-logged demand has been estimated to be as high as three million units. Results from home builders' surveys also indicate a rise in housing recovery for the remainder of 1993 (Fig. 3).

A key element in affordability is financing costs. A sharp rise in long-term interest rates would dampen housing prospects. Such an outcome is unlikely in 1994, however, because of the reasons I've discussed: low inflation, moderate and sustainable economic growth, and accommodative monetary policies.

Given the likelihood that many renters will take advantage of the opportunity to buy homes, the demand will continue for single-family houses. Vacancy rates in apartments are currently high and unlikely to fall in 1994, giving little reason for improvement in that sector. Overall housing starts are projected at 1.4 million units in 1994, including about 1.2 million single-family units.

Wood Products Outlook

Softwood Lumber

Most 1993 data point to a consumption level of slightly over 45 billion board feet of softwood lumber, about the same as that in 1992.² The economic and housing outlook is likely to support an increase of one to two billion board feet (Fig. 4). How does softwood lumber supply measure against this robust demand?

The timber supply situation on the West Coast is well known, and its impact on wood products supply is evident in the data. For 1993, western lumber production is on a pace of 17.5 billion board feet, down 7% from 1992 and 8% from 1991. Underlying forces point to continued restrictions in the region:

- The backlog of uncut Federal timber under contract in Oregon and Washington is shrinking and has been reported at 3.1 billion board feet compared to 4.4 in 1992.
- Timber prices have risen, continuing a trend begun in 1991 (Fig. 5).
- Timber price increases have had a predictable effect on supply from private nonindustrial holdings. Recent harvests from this source have approximately doubled (Fig. 6), but the size of this sector is too small to make up the shortfall from traditional Federal sources. Moreover, private industrial forest owners have evidently been unable to increase their supply significantly.

These trends suggest that western lumber mills will find it difficult to increase output in 1994, at least until the administration's "option nine" timber compromise proposal is put into effect. In this plan, the amount of timber harvested each year from Federal lands is set at 1.2 billion board feet. This amount falls 77% short of the 5.2 billion annual average cut from 1985 to 1989 and 65% short of the 3.6 billion cut from 1980 to 1984. However, the export of logs, primarily from the Pacific Northwest, has fallen by 1.5 billion board feet since 1989, moderating the effect of the Federal timber loss. Nevertheless, it seems unlikely that western lumber mills will be able to increase lumber output. Therefore, the increase in demand will have to be met from other regions.

²1 board foot = 0.0024 m³.

In the South, production is on a pace to slightly exceed the 1992 level of 14.1 billion board feet. Maximum capacity is estimated at 16-17 billion board feet, but such a level of output is likely only under optimum conditions. An increase in production of 1 billion board feet is considered attainable if prices for logs increase sufficiently to draw the needed timber on the market.

The remaining shortfall in supply would have to be obtained primarily from Canada, as indeed it has been in 1993. Canadian production through the first 8 months of 1993 rose by 6.7%, while exports to the United States are projected to be 9.7% higher than a year ago.

Prices for lumber have followed a roller coaster path in 1993: they doubled and reached new records in the first quarter, collapsed in the second, rose again through most of the summer and fall, and are approaching earlier high levels as the end of the year approaches. This pattern is not new or unusual to the lumber market in an expanding, housing-led economic recovery. What is different is the extent, rapidity, and suddenness of the swings. Normally, such swings are experienced only during strikes and similar anomalies.

Annual figures offer a better perspective (Fig. 7). Compared to 1992, the price of dimension lumber increased by about 40% in 1993. Given the likelihood of increased demand, we could expect a higher price in 1994. The rise could be aggravated by a doubling of the tariff on Canadian lumber imports, as recently recommended by the Department of Commerce.

Hardwood Lumber

Through the first 7 months of 1993, hardwood lumber consumption was slightly below consumption at the same time in 1992. However, for 1993 as a whole, consumption is expected to increase by about 2%, to about 10.7 billion board feet. Anticipated growth in the important hardwood markets, notably furniture and cabinetry, suggests that a rise in production and consumption is likely in 1994.

Structural Panels

For all of 1993, structural panel consumption is projected to rise by 3%. In 1994, 2% growth is anticipated. This change masks an important shift in regional shares of production. Western plywood production, which was 6.2 billion square feet as recently as 1990, is projected to be 3.2 billion square feet in 1994 (Fig. 8). Oriented strandboard production, on the other hand, is projected to rise from 7.2 billion square feet in 1993 to 8 billion square feet in 1994. This increase would have been greater except for the low profitability of the early nineties, which discouraged construction of new mills. The rise in oriented strandboard production will be boosted by the construction of three new mills in 1994 and another three mills in 1995. The mills are expected to add 2 billion square feet of capacity.

Nonstructural Panels

Problems affecting western plywood production have influenced and will continue to influence markets for nonstructural panels as well. Most of the lost plywood capacity will affect higher grade, sanded plywood that is slated for industrial and manufacturing uses. This loss has created opportunities for substitute products, such as particleboard and medium density fiberboard. Industries for both of these products have enjoyed a banner year in 1993, and 1994 is likely to follow suit. Plans to build new mills, which were shelved during the

nineties, are being dusted off in light of the improved economics. The one flaw in the otherwise bright scenario is the shortage of fiber in the West. As a result of the reduction in lumber output, some mills have had difficulty procuring enough wood shavings. As a result, some mills have been operating on the basis of 5 days per week, and the western industry as a whole is reported to be functioning at 84% of capacity compared to 91% elsewhere in the country. Mills have resorted to innovative solutions to the shortage of wood fiber, including the use of straw (up to 8% of product content) and demolition debris (in mills located near cities).

Pulp and Paper

From the viewpoint of profitability, 1993 has been a year to forget for the pulp and paper sector. Despite modestly increasing demand for their products, most papermills have been reported to be operating at little better than break-even or even at loss as a result of their inability to raise prices in a soft market. The year has been marked by many mill shutdowns and downtime, but these have failed to turn the market.

Pulp prices have been mired at their cyclical lows throughout most of the year and only toward the end of the year have some increases been announced. At the same time, however, pulpwood prices have been steady to rising.

The outlook for 1994 is mixed. Some producers forecast an end to the industry's chronic profit weakness, but not until the end of the year or even into 1995, depending on the amount of economic growth.

A continuing development in the paper industry is continued user pressure on companies to supply products with higher recycled-fiber content. The administration issued an executive order in the fall that set targets for recycled-fiber content in government-purchased paper. According to the paper trade association, 38.5% of the nationwide paper consumption has been recovered for domestic recycling or export in 1993 to date. The association's 40% goal is expected to be met in 1994 and to climb to 42% in 1995.

Summary

In general, the prospect for the wood products industry looks favorable for 1994. The outlook for 1.4 million housing units appears conservative, and stronger housing production would guarantee a very robust year. The industry is faced with local problems of timber supply, but growth in capacity where timber is more freely available will ameliorate the supply outlook nationwide. Supplies of wood products should be adequate, although prices are likely to rise.

A strong economy will benefit most segments of the wood sector, but particularly those that own and grow timber. Stumpage prices for species such as aspen and southern pine have risen substantially since 1991. If sustained, these higher prices will provide a strong stimulus for increased investment in forestry and timber management, increasing the long-term supply of wood fiber.

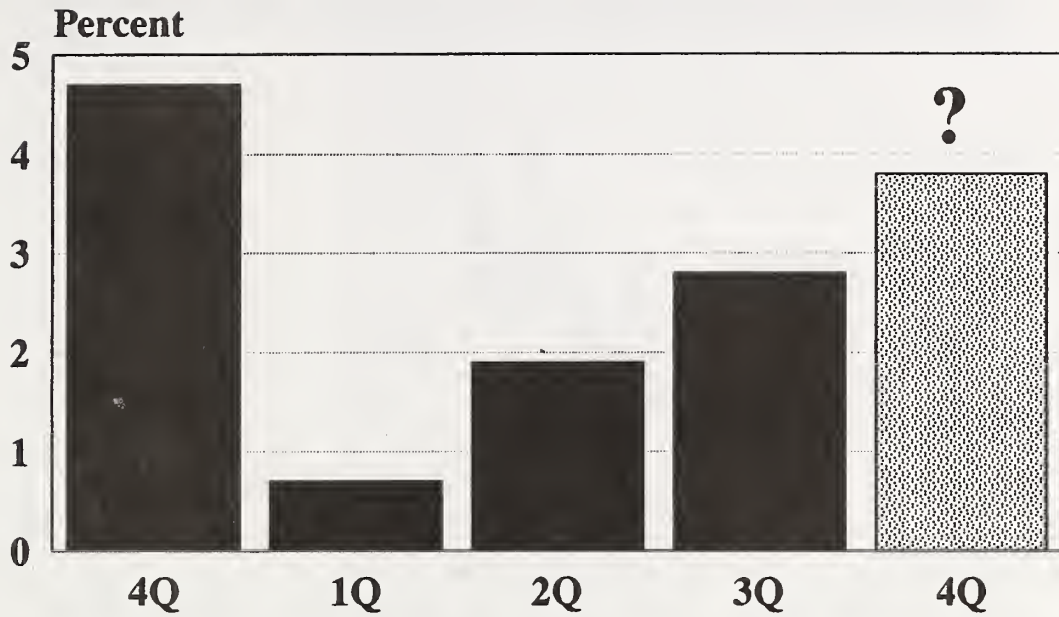


Figure 1. Real gross domestic product growth from 4th quarter of 1992 to 3d quarter of 1993. Projected growth for 4th quarter of 1993.

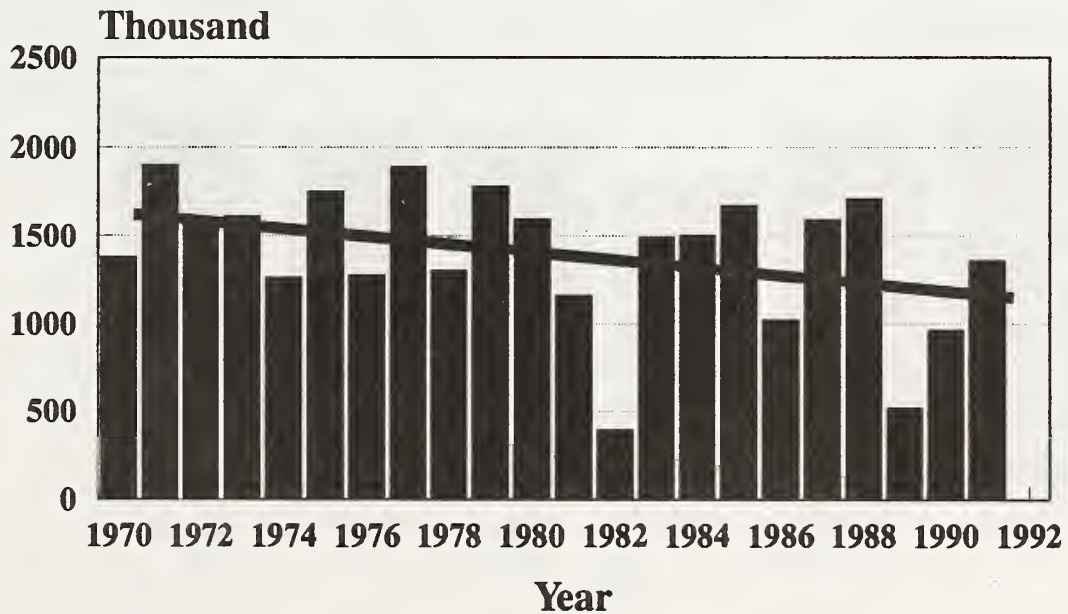


Figure 2. Change in number of new households from 1970 to 1991.

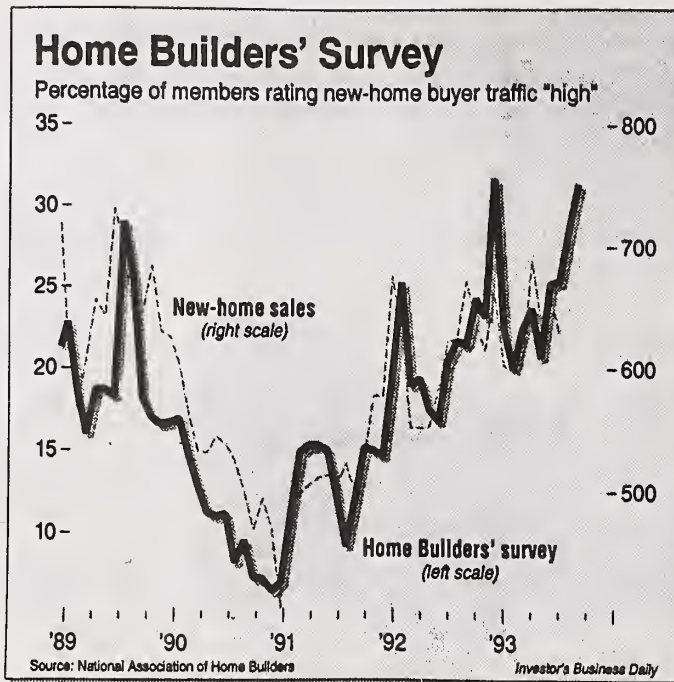


Figure 3. Results of home builders' survey on demand for new homes.

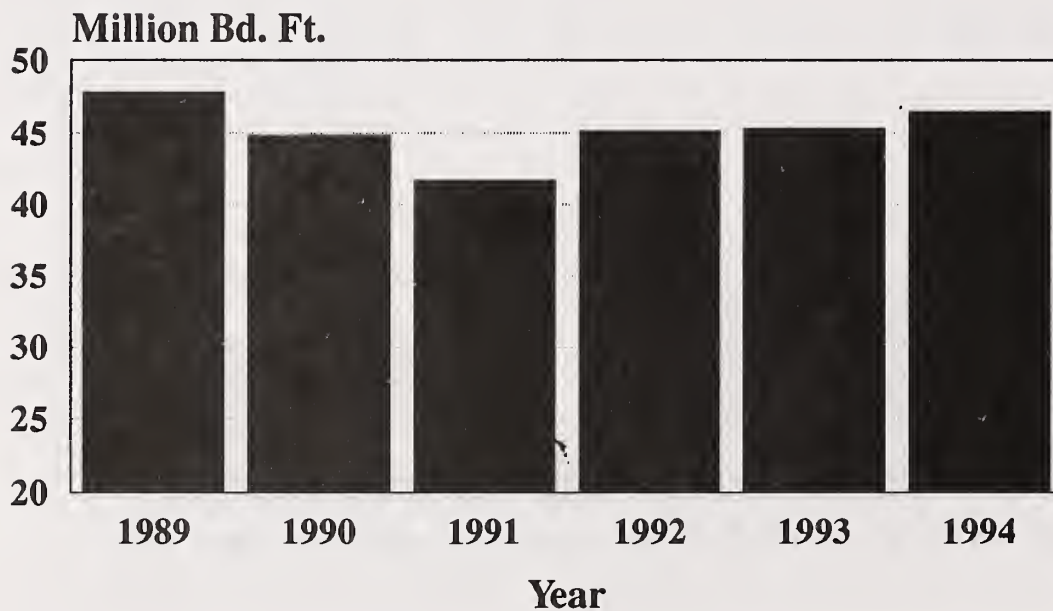


Figure 4. Softwood lumber consumption. 1 board foot = 0.0024 m³.

OREGON DEPARTMENT OF FORESTRY STUMPAGE PRICES \$/MBF

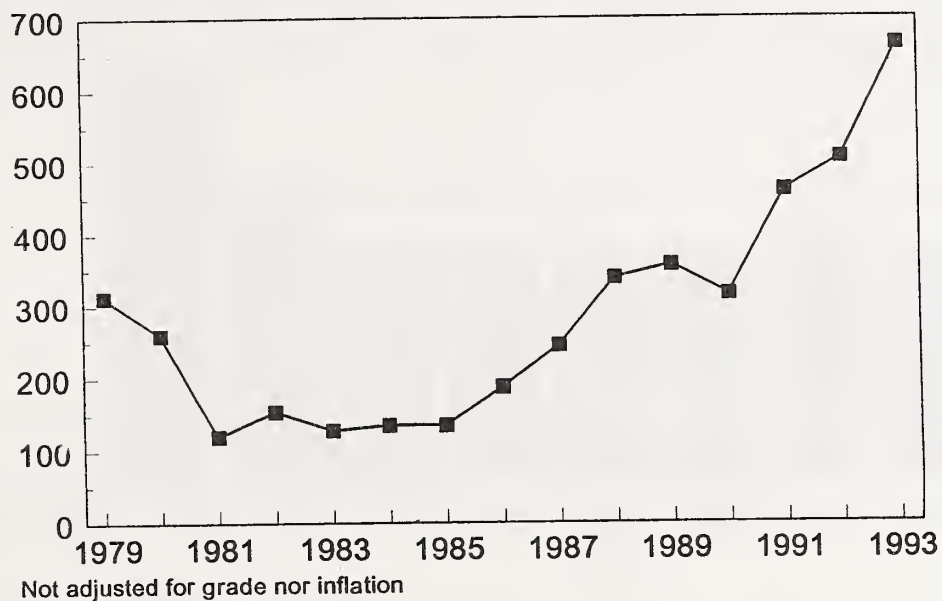


Figure 5. Trend in Oregon timber prices since 1979.

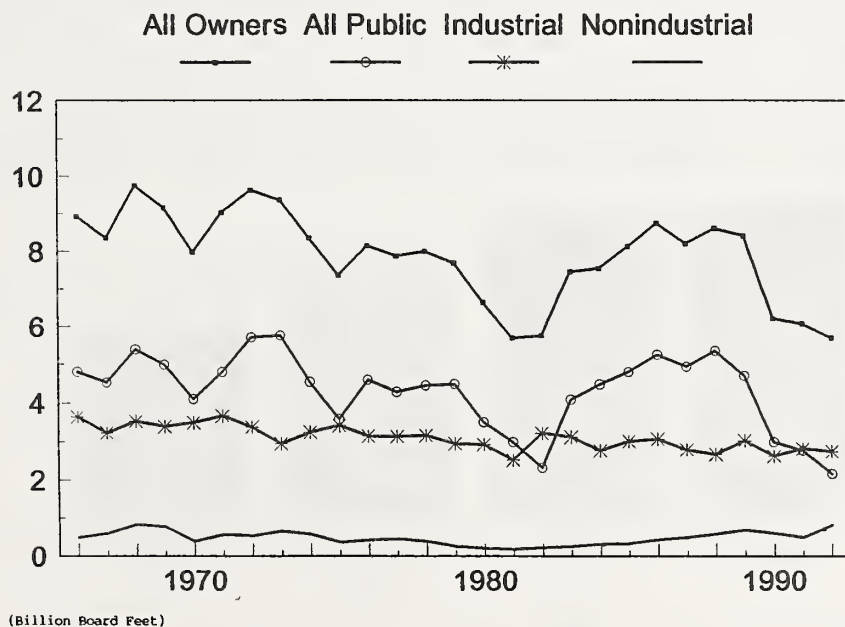


Figure 6. Timber harvests in Oregon, 1966–1992.

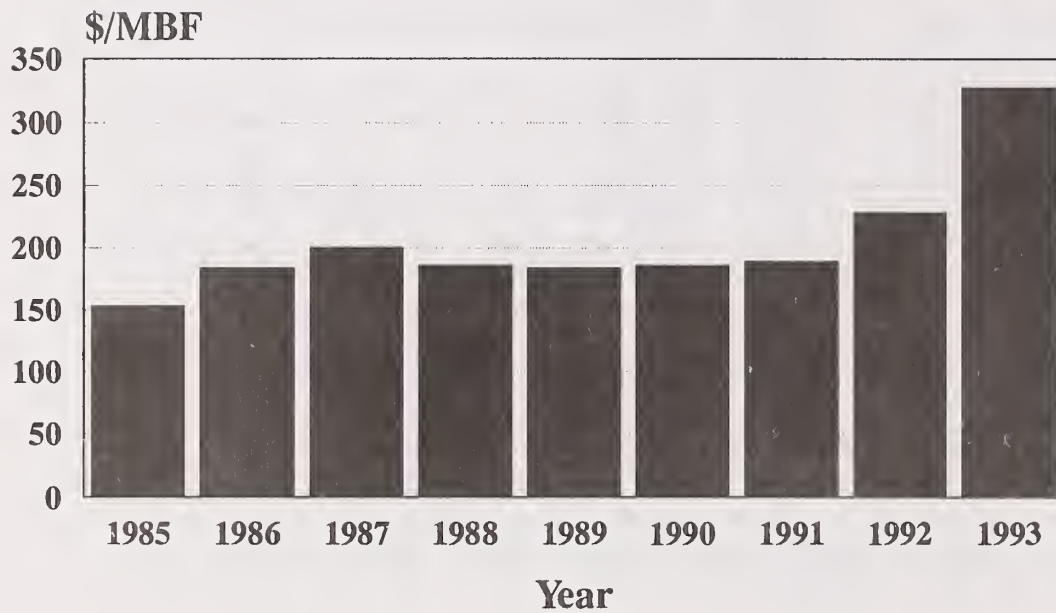


Figure 7. Annual prices of Spruce-Pine-Fir dimension lumber.

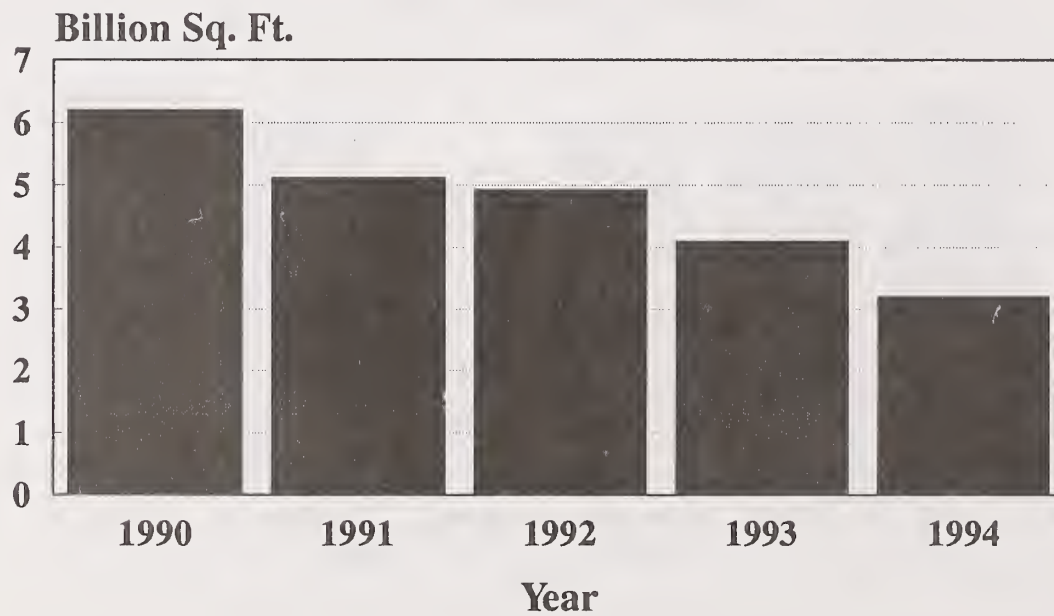


Figure 8. Projected trend in western plywood production.

Outlook '94

For Release: Wednesday, December 1, 1993

FORESTS AND TIMBER SUPPLIES IN THE 21 CENTURY

Dr. H. Fred Kaiser
Director for Forest Inventory, Economics,
and Recreation Research
USDA Forest Service

The forest resources of the Nation have been substantially altered as a result of human development. These resources are resilient, but their condition has changed over time in response to changing human demands and resource management. A review of historical resource trends provides a context for evaluating the prospective future for renewable resources.

American society in the 20th century changed from rural and agrarian to urban and industrialized (MacCleery, 1992). Although this change has been accompanied by a corresponding physical and psychological separation of people from the land and resources, today's urbanized nation is no less dependent on the products of its forests and fields than were the subsistence farmers of America's past. The current forest situation suggests a continued capability to meet those demands.

- o Following two centuries of decline, the area of forestland has stabilized. Today, the United States has about the same forest area as in 1920.
- o The area consumed by wildfire each year has fallen 90 percent; it was between 20 and 50 million acres in the early 1900s and is between 2 and 5 million acres today (fig. 11).
- o Nationally, the average volume of standing timber per acre in U.S. forests is 30 percent greater today than in 1952.
- o Tree planting on all forest land rose dramatically after World War II, reaching record levels in the 1980s. Many private forestlands are now actively managed for tree growing: 70,000 certified tree farms encompass 95 million acres of privately owned lands.
- o The tens of millions of acres of cutovers or "stumplands" that existed in 1900 have long since been reforested. Many of these areas today are mature forests. Others have been harvested a second time, and the cycle of regeneration to young forests has started again.
- o Eastern forests have staged a major comeback.

- o Recreational use on National Forests and other public and private forestlands has increased manyfold.

Although there have been favorable trends in forest resources in the last century, increasing human demands will continue to impact natural resources. The ability of forest systems to maintain a balance of successional stages through natural disturbance has been severely reduced by human development. For example, the present forest area does not necessarily have the same balance of stand structure, and therefore cannot support the same groups of plants and animals as found in large, natural forested areas. As a result, the distribution and abundance of biological communities has been significantly altered.

Timber Supplies

For the first time in its history the United States does not have a large, unreserved volume of softwood sawtimber in North America to draw upon to meet the Nation's needs for building materials and other purposes. First the Northeast, then the Lake States, the South, the U.S. West Coast, British Columbia, and the South again provided the timber for increased softwood lumber production.

There is 737 million acres of forest classified as forestland--land that is at least 10 percent stocked with trees, or formerly had such cover, and not developed for other purposes (Powell, et. al. 1993). Forestland is evenly divided between the eastern and western United States.

The two-thirds of the forest land (490 million acres) that can grow more than 20 cubic feet of industrial wood per acre per year is called timberland. Most of the timber harvested for roundwood products comes from this part of the forest resource base. Nearly three-quarters of the timberland is in the eastern half of the country, while in the western United States timberland is found primarily in the Pacific Coast States and in Montana, Idaho, and Colorado.

About one-third of the Nation's forestland is in Federal ownership. These lands are concentrated in the Rocky Mountains and Pacific Coast States. Some of these lands are high elevation forests that have great scenic beauty and are important recreation sites. Most of these areas have not been harvested for timber, and they contain a large part of the Nation's softwood timber inventory.

The Nation's timberland contain over 858 billion cubic feet of roundwood: 92 percent of this is in growing stock (live, sound trees suited for roundwood products) and the remaining 8 percent is in rotten, cull, and salvable dead trees. Some of the latter may be suitable for lumber and veneer, but most is usable only for pulp, fuel, and other products where there are no significant log quality requirements.

Timber inventories rise when net annual growth (total growth less mortality) is greater than the volumes removed by timber harvesting, clearing, or changing land use (timber removals). The growth-removals balance for the United States is positive for the total for all species (1.33), for softwoods (1.09), and for hardwoods (1.8). The ratios in the North are very high, indicating continued substantial increases in growing stock volume. The softwood ratio for the South has been declining and was 0.88 in 1991. This is the first time since 1952 that removals exceeded growth in the South.

The current growth-removal balances for timber show that the hardwood forests and some eastern softwood forests can support additional harvests. However, these balances will change. Future harvests, particularly in the decades beyond 2000, could vary over a wide range. Nonetheless, assuming that timberland owners continue to respond as they have in the past to price and inventory changes and manage their stands as projected, timber harvests from private lands will be increased substantially in most regions. Total projected softwood roundwood harvests rise from 11.4 billion cubic feet in 1991 to 14.5 billion cubic feet in 2040, an increase of 27 percent (table 1). Projected hardwood harvests rise from 6.8 billion cubic feet in 1991 to 10.6 billion in 2040. The largest increases will be in the South.

Table 1.--Roundwood supplies from U.S. timber resources, by softwoods and hardwoods, specified years, 1952-1991, with projections to 2040.

Year	Total	Softwoods	Hardwoods
-----Billion cubic feet, roundwood equivalent-----			
1952	9.5	6.9	2.6
1962	9.6	7.1	2.5
1970	11.5	8.7	2.8
1976	12.5	9.5	3.0
1986	18.0	11.7	6.3
1991	18.2	11.4	6.8
2000	18.8	10.7	8.1
2010	20.4	11.2	9.1
2020	22.2	12.4	9.9
2030	24.2	13.7	10.5
2040	25.0	14.5	10.6

Public Lands

Most public lands that produce timber in the United States are managed under some form of sustained yield. The National Forests have been most important in recent decades, accounting for over 50 percent of total softwood output on public lands. National Forest harvest grew rapidly in the 1950's and 1960s, reaching a peak in 1987. Although harvests fluctuated in response to market conditions, allowable sale quantities were relatively stable in the 1980's.

Since 1989, various legislative and judicial directives have caused the allowable sale quantity to drop from 10-11 billion board feet per year in the 1980's to a proposed 4.6 billion board feet in 1994. We project that the allowable sale quantity for National Forests will stay at that level through 2000 and then rise to 5.5 billion board feet in 2040. The assumed increase reflects the results of timber management activities.

Other public ownerships that have significant timber sale programs include the Bureau of Land Management and a number of States. Significant among the State programs are those in the Lake States and the State of Washington. Timber harvests (removals) from State-owned lands reached a peak of one billion cubic feet in 1979. The allowable sale quantities on Bureau of Land Management lands are expected to be 40 million cubic feet in 1994 compared with an annual average of some 200 million cubic feet in the 1980's. We project future annual sales volumes to remain at 40 million cubic feet. Harvest on State of Washington lands is projected to be 100 million cubic feet as compared with 150 million in the 1980's. For both of these ownerships, the harvest reductions are assumed to be due to concerns over wildlife habitat and other aspects of the environment.

We project harvest on the remaining other public lands to remain near the current level of 500 million cubic feet, although there have been reports of declines on some ownerships because of management for threatened and endangered species.

As indicated by the above projections, it is highly unlikely that there will be significant expansion in timber supplies from public lands. As a consequence, the rising demands can be met only by increases in harvest on private lands, growth in net imports (increased imports and/or decreased exports), expanded use of recycling and other technologies that conserve on wood use and/or extend the service life of end products, increased use of hardwoods, and increased use of non-wood substitutes.

Softwood Supplies from Private Lands

Currently, softwood growing stock removals exceed growth on forest industry lands in all regions and for nonindustrial private lands in the South. For nonindustrial private lands in the North, Rocky Mountains, and Pacific Coast regions growth is larger than removals.

Total softwood harvest on forest industry lands is projected to decline from 4.3 billion cubic feet in 1991 to 3.8 billion cubic feet in 2000 and in 2010. In 2020, harvest increases to 5 billion cubic feet and continues to rise through 2040.

Total softwood harvest on nonindustrial private lands is projected to increase throughout the projection period, expanding from 4.4 billion cubic feet in 1991 to 5.9 billion cubic feet in 2040, although there is some variation in regional trends. Between 1991 and 2000, harvests increase in every subregion of the country except western Oregon and Washington. After

2000, harvests continue to increase in the North, increase through the remainder of the projection period for western Washington and Oregon, and show mixed patterns in the remaining regions.

A key to these projections are assumptions about management of private timberland. Forest industry ownerships are projected to be managed intensively. Nonindustrial private ownerships are projected to be managed as reflected in past inventories. For the South, an effect of these assumptions is that the area of pine plantations increases to about 45 million acres by 2040, up from about 23 million acres today. Timber harvest from these plantations is projected to increase from 831 million cubic feet currently to 6.1 billion cubic feet annually in 2040. Harvest from other forest management types in the South is projected to decline. Most of the net increase in U.S. softwood harvest of 4 billion cubic feet between 1992 and 2040 is projected to come from pine plantations in the South.

These projections are generally consistent with those in past analyses where the area of pine plantations was projected to be 45.2 million acres. Investments will continue to be monitored and updated as appropriate for future assessments. For example, Haight (1993) suggests that the expected present values of low-cost management options that result in mixtures of conifers and hardwoods are superior in some situations to the expected present values of intensive management options.

If these plantations are not established as projected, prices for timber products will rise more than projected, especially in the long term. In addition, increased state and local regulation of private lands could detract from investments for timber production, causing further pressures on softwood prices. In some situations, regulations such as mandatory reforestation may enhance forest management, however.

Trends in Timber Use and Projected Demands

Between 1960 and 1980, there was a slight upward trend in lumber consumption, punctuated by well-defined short-term fluctuations. Demand for lumber follows cycles in new housing starts and other general measures of the economy. For example, the severe recession of the early 1980's caused a decline in housing that forced a drop in lumber demand. This was followed in the mid-1980's by record consumption that peaked in 1987. In the late 1980's and through the early 1990's new housing starts have been low in comparison with the record years of the 1980's and lumber demand has been depressed.

Demand for softwood plywood rose rapidly through the decades of the 1950's and 1960's, reaching a peak in the early 1970's (table 1). Much of the growth was due to the substitution of plywood for lumber in many end uses. By the 1970's, opportunities for this substitution had largely been captured, and demand for plywood began to follow housing cycles, much as for lumber.

The late 1970's and 1980's were years of major changes in the structural panel industries as first waferboard and then oriented strand board (OSB) began to make significant inroads into markets for solid softwood plywood.

All non-plywood structural panels produced in the United States are now classified as OSB and its production has had major influences on the species and quality of roundwood needed in the structural panel industry. These panels can be made from almost any species of wood, with the preference being soft hardwoods such as aspen. Consumption of structural panels reached record levels in response to the strong markets of the mid-1980's. Future growth in demand for structural panels is expected to be strongest for fiber-based panels.

Table 2.--Lumber consumption in the United States by species group and structural panel consumption by panel type, specified years, 1960-1990, with projections to 2040

Year	Lumber		Structural panels	
	Softwoods	Hardwoods	Softwood plywood	OSB/ waferboard
	-----Billion board feet-----		-----Billion square feet----- 3/8-inch basis	
1960	29.6	8.1	7.8	(n)
1970	32.0	7.9	12.4	(n)
1976	36.6	8.0	17.7	0.2
1986	48.0	8.8	21.7	4.2
1990	45.9	10.8	18.8	6.2
2000	46.8	11.0	18.4	10.3
2010	49.9	11.9	18.0	14.0
2020	56.6	12.6	17.8	18.8
2030	59.6	13.1	17.3	21.9
2040	61.8	13.8	17.5	24.8

(N) = Less than 50 million square feet.

Consumption of wood in the manufacture of pulp, paper, and paperboard grew rapidly in the decades following World War II, and then continued to grow at a more modest pace in the 1970s and 1980s. This growth in demand was in response to rapid growth in the economy, which stimulated consumption of packaging and other pulp-based products. Annual per capita paper and board consumption grew from 360 pounds in 1952 to 600 pounds in the early 1970s, and reached record levels of nearly 700 pounds by the late 1980s. Woodpulp consumption in U.S. paper and board production grew from 17 to more than 60 million tons over the same time period. Much of the increase in consumption of wood fiber during the 1960's and 1970's came from the byproducts of lumber and plywood manufacture. In recent years, the use of hardwood roundwood has increased, and this trend is expected to continue in the future.

The longrun demands for all major wood products are projected to increase through 2040. The projection methodology used takes into account the effects of supplies of products and projects market equilibrium measures of demand and supply.

After declining in 2000, consumption of softwoods continues to grow through the projection period, reflecting a growing economy and repair and remodeling of an aging housing inventory. Also, experts believe that, over time, new houses will be bigger, consuming more lumber and structural panels than today's new homes. By 2040, softwood timber consumption will be about 1.1 times consumption in 1990.

Projected consumption of hardwood timber in 2010 will be some 1.3 times consumption in 1990, largely due to changing technologies and the rising demands of a growing economy. Demands for pulpwood, fuelwood, and pallets in particular are expected to increase and by 2040, consumption of hardwood roundwood is 1.5 times consumption in 1990.

Imports of timber products have been rising and have supplied important parts of the Nation's woodpulp, newsprint, and softwood lumber. Net imports provided 6.8 percent of total U.S. timber consumption in 1990. Most imports originate in Canada. The 1980's and early 1990's were characterized by several trade disputes with Canada centered on softwood lumber, western redcedar shakes and shingles, and softwood plywood. Similar disagreements have characterized this bilateral trade relationship in earlier decades of the 20th century. It is assumed that the current issues will be resolved over time and that future imports from Canada will be determined largely by U.S. demand and the extent and competitiveness of Canada's timber resource. Canada's longrun supply potential is considerable, but there is uncertainty as to whether current harvest rates can be maintained because of increasing values being placed on environmental concerns.

Exports of timber products have also been going up. The outlook for exports varies by product, however. In total, annual export volumes are projected to increase from 2.7 billion cubic feet, roundwood equivalent, in 1990 to 4.5 billion in 2040.

The volume of imports of logs into the United States has generally been small over the years and until recently, has not been a major trade or domestic issue. In the early 1990's there was much interest in the importation of softwood logs into the United States from Siberia. Phytosanitary concerns led to an embargo on these imports. Guidelines and restrictions are currently being developed that will determine what forms of wood products can be imported from the Russian Federation and other countries.

Beginning in the early 1960's and continuing today, the export of softwood logs has been a controversial issue. These exports originate mainly in Washington and Oregon and affect roundwood prices and the structure of the timber industries in that part of the country. Legislation became effective January 1, 1991 that codified and tightened a ban on softwood log exports from Federal lands in the West in the coterminous States. This ban had been in effect on a year- to-year basis since 1974. In addition, the legislation banned exports from other public lands in these States except that 25 percent of the annual sales volume from lands managed by the State

of Washington could continue to be exported. In October, 1992, this ban was extended to include all softwood logs from lands managed by the State of Washington. Questions over the legality of this legislation led to passage of the Forest Resources Conservation and Shortage Relief Amendments Act of 1993 that directed the Secretary of Commerce to enforce a ban on exports from State lands in the coterminous western States. The terms of this legislation are assumed to continue in the future. Currently, there are no restrictions on exports from private lands and none are assumed for the future.

Trade

Projections of softwood lumber imports to increase from 11.3 billion board feet in 1992 to 14.8 billion board feet in 2000 and reach 13.6 billion board feet in 2040. Most of these imports come from Canada, although about one billion board feet comes from New Zealand and other Pacific Rim countries by 2000. Most of the imports from the Pacific Rim are assumed to be used in the millwork industry of the Pacific Northwest. Some people argue that timber harvest in Canada will drop by 20 percent or more by 2000 and that increased imports from the Pacific Rim are problematic because of concerns over potential imports of forest pests and diseases. If imports from these sources do not materialize as projected, U.S. prices for softwood lumber will increase even more than shown.

Exports of softwood lumber increased from 1.9 billion board feet in 1986 to 3 billion in 1991. We project future exports to stay near 3 billion board feet, in part reflecting the projected domestic market situation. In some foreign markets, U.S. softwood lumber fills specialty end uses and in these uses, price may not be a key concern. Consequently, there will continue to be exports despite rising U.S. domestic prices. Similarly, softwood log exports are projected to stay at 2 billion board feet per year.

Wastepaper Recycling

Increased recycling of paper and paperboard will have wide-ranging and significant impacts on the timber industries and shift the timber demand/supply outlook. For our analysis we analyzed economic and technological changes of the U.S. and Canadian industries and concluded that increased paper recycling represents a fundamental long-range development which will be characteristic of the U.S. pulp and paper sector in the foreseeable future.

The analysis involved the competitive evolution of production processes and fiber markets in the North American pulp and paper sector. Current and near-term future technologies were considered in the study, and the economic analysis encompassed regional production and trade for all of the principal pulp, paper, and paperboard commodities. The study analyzed the likely evolution of markets for fiber inputs, including various categories of recovered paper and pulpwood inputs, and analyzed how the competitive evolution of technology would respond to market conditions.

In 1986, 28 percent of the paper and paperboard consumed in the United States was recovered for recycling. Of the total amount recovered, about four-fifths was recycled in U.S. paper and board mills, and about one-fifth was exported. We project that the rate of paper recovery for recycling will reach 48 percent by 2000 and 57 percent by 2040.

In 1986, the tonnage of recovered paper recycled in U.S. paper and board mills amounted to 25 percent of U.S. paper and paperboard production. By 1992, the U.S. paper recycling rate had climbed to 30 percent. Recovered paper prices have remained generally depressed in recent years due to the rapid expansion of collection programs. Low prices for recovered paper have stimulated expansion of recycling capacity in the pulp and paper industry. We project that the U.S. paper recycling rate will reach 37 percent by 2000. By the end of the 1990s, we project that prices for most recovered paper commodities will increase substantially, eliminating the current market glut and dampening the growth in recycling capacity. However, we project a gradual increase in paper recycling into the next century, with a projected recycling rate of 45 percent by 2040.

Projected increases in paper recycling result in slower projected growth in pulpwood consumption and slower growth in timber harvest than projected in previous analyses. This will help to extend U.S. timber supplies, especially for pulpwood-quality timber. Softwood pulpwood prices in the South are projected to remain relatively stable. Hardwood pulpwood prices in this region are projected to remain relatively stable for the next two decades and then increase beyond 2010 because of declines in hardwood pulpwood inventories.

Timber Demand-Supply Comparisons

It seems clear that real sawtimber prices (net of inflation or deflation) will continue to rise in the future under a wide range of plausible demand and supply situations. Recycling, decreasing sales volumes from public lands, and increasing state and local restrictions on use of timberland for harvest add uncertainties to the timing and extent of the price increases that might occur. Even after accounting for the effects of recycling on roundwood prices, however, stumpage prices in 2040 in the Pacific Northwest subregion are projected to be one-third more than in 1990 and in the South, nearly double prices in 1990. These market signals will lead to shifts in how wood is used and how it is grown. Rising prices will increase the value of the timber resource regardless of ownership.

The timber demand-supply outlook differs considerably for the periods through about 2010 and 2010-2040. In the short term, rapidly rising stumpage prices are caused by rising demands and restriction of harvest on Federal lands. After 2010, a combination of maturation of pine plantations in the South and increased recycling leads to declines in stumpage prices through 2040, although prices in 2040 are still above current levels.

The price outlook for the bulk of the hardwood timber--the smaller sized timber of common species--is for lower prices than for softwood timber.

However, after 2000, as hardwood inventories begin to show substantial declines in response to increased removals, stumpage prices are expected to rise.

During recent decades, there have been demand pressures on high-quality preferred species such as select white and red oak, walnut, hard maple, and black cherry. The resulting stumpage price increases led to the development of substitutes such as plastic overlays for furniture. Although analyses of the past decade have been mixed as to continuation of price rises, it is assumed that prices for preferred species will rise in the future because of strong demands.

Rising stumpage prices will be reflected in prices of timber products. For example, softwood lumber prices measured in real terms increase by nearly one-third between 1990 and 2040.

The equilibrating mechanism of rising prices has obvious but differing effects on consumers and producers of timber products. Rising prices for lumber, for example, would have a marginal effect on the cost of a house, influencing some people to reconsider decisions about the type and size of housing they could afford. Rising incomes will offset somewhat the influence of rising prices, however. Owners of timberland, on the other hand, may invest more money into land management because their real wealth will increase as prices increase and investment opportunities become more attractive.

Opportunities for management

There are three major ways to increase supplies in response to rising demands for timber: (1) extending supplies through improved utilization, (2) increasing harvests from the existing timber resource, and (3) increasing net annual growth.

Timber supplies can be extended by:--Increasing the useful life of wood products by preservative treatments, improving designs of new structures, and renovating and maintaining existing structures rather than replacing them.--Improving efficiency in harvesting, milling, construction, and manufacturing.--Utilizing unused wood materials such as logging residues; treetops and limbs; rough, rotten, and salvable dead trees; trees in urban areas, fencerows, and low-productivity forest areas; and urban wood wastes.--Increased recycling of paper and paperboard.

Harvests from the existing timber resource can be increased by increasing softwood and hardwood timber harvests on forests in the East. Sustaining these harvests beyond a few decades will require investments in regeneration and more-intensive management to increase net annual growth, especially for control of fire, insects, disease, and weeds.

Future forest management must, however, consider ecosystem management principles. At the UNCED meeting in Rio de Janeiro, the United States

announced a policy of ecosystem management for natural resources. In June, 1993, at the second Ministerial Conference on the Protection of Forests in Europe, the United States announced a goal of managing forests on a sustainable basis by the year 2000. As implemented by the Forest Service, ecosystem management means to produce desired resource values, uses, products, or services in ways that also sustain the diversity and productivity of ecosystems. An emphasis on ecosystem management may change the nature of production possibilities and feasibilities.

The emphasis on ecosystem management for public lands is occurring in part because of the cumulative effects of past management activities on public and private lands. These activities often led to increased sedimentation in stream; less productive rangeland conditions; fragmented plant, animal, and fish habitats, and increased forest health problems. Population growth, increased use, and other factors have also caused significant declines in the range and numbers of many native flora and fauna. Public lands are the last refuge for many vanishing species.

Past management has often focused more on selected parts of ecosystems than on the wholes or in the processes that keep ecological systems healthy, diverse, and productive. New information and a better understanding of ecological processes highlights the role of biological diversity as a factor in sustaining the health and productivity of ecosystems.

Ecosystem management recognizes that natural systems--their composition, structure, and function--must be sustained in order to meet the social and economic needs of future generations. Managing for healthy ecosystems conserve biological diversity, allows for sustainable development and thus provides for economic opportunities.

Summary

The Nation has made a great deal of progress over the past several decades in production of resources and enhancement of productivity. Past performance clearly indicates that U.S. resources are resilient and renewable and responsive to management. Their resilience and renewability account for the management opportunities we have today to increase their products and uses as well as their contribution to the environment.

As our Nation continues to grow in the coming decades, Americans' perspectives on natural resources will change in terms of problems, opportunities, and the appropriate mix of management inputs to manage the country's renewable resources. Increasingly, international dimensions of U.S. forestry will be part of the framework for framing problems and opportunities and pursuing them. This is why periodic assessment of the renewable resource situation is so important in providing the factual basis for policy development.

The United States is in an unprecedented situation with regards to softwood sawtimber supplies. For the first time in its history the United States does not have a large, unreserved volume of softwood sawtimber in North America to draw upon to meet the Nation's needs for building materials and other purposes. Also future timber production from U.S. forests are especially sensitive to assumptions about investments in plantations and trade. Without the expected increase in recycling, softwood and hardwood sawtimber prices would be even higher than projected and will help offset significant price increases.

Future forest management will also involve ecosystem management principles. Ecosystem management does not eliminate the necessity for making tough choices. The range of natural ecosystem variability is likely to differ in some important respects from future conditions of ecosystems and landscapes desired by society. In virtually all landscapes, a compromise must be struck between natural processes and societal demands. In attempting to reach a desired future condition, managers may alter the hierarchy of ecosystems and create resource interactions in both space and time. The nature of ecosystem disturbance and recovery will in part determine these interactions.

Outlook '94

For Release: Wednesday, December 1, 1993

THE OUTLOOK FOR FOOD PRICES IN 1994

Ralph L. Parlett
Agricultural Economist, Economic Research Service

I will start today with a brief look at what has happened to food prices in 1993. In so doing, we can see how some of this year's events may have a bearing on the food price situation next year and perhaps into 1995.

The 1993 Wrap-up

The Consumer Price Index (CPI) for food in 1993 will average about 2 percent above 1992. While the 2 percent increase for food this year is greater than the twenty-five year record low of 1.2 percent in 1992, it is still a relatively small increase. The food price increase compares with a 3 percent increase in the CPI for all goods and services. These increases are very small compared with increases between 5 and 6 percent only 3 years ago (1990).

There are three major factors influencing food prices; the farm value of food, costs of processing and distributing food, and consumer demand. Consumer demand and processing and distributing food are factors effected by the general economy. One of the major forces dampening food price increases has been slow growth in the general economy. As part of that slow growth, disposable income has been rising at a slow rate of less than 1 percent. Disposable personal income is a key factor influencing consumer demand and consumer demand for food has been lackluster at best in 1993. Also, inflation has been low, keeping costs of processing and distributing food from rising significantly. Costs of processing and distributing food account for more than 70 percent of retail food costs and include labor, packaging, transportation, energy, and other marketing inputs. These input costs in 1993, overall, will increase less than the general inflation rate.

The remaining factor effecting retail food prices is the farm value of food. It increased just under 2 percent in 1993. The farm value of food is the cost of farm commodities used in finished food products and accounts for a little under 30 percent of retail food costs. The farm value for a number of food categories declined in 1993, but red meats and fresh vegetables rose sharply.

Cold wet weather throughout the first half of 1993 caused higher farm prices for fresh vegetables and meats and also caused retail prices to rise. These food categories carry a large enough weight in the food CPI to be responsible for most of its 2 percent rise in 1993.

In January through March, wet cold weather damaged crops or disrupted harvests in western and eastern growing areas, reducing supplies of a number of fresh vegetables and pushing prices up. In addition, the cold wet weather prevented field preparation for planting spring crops. As a result, spring crops were planted late in California as well as in east coast growing areas as far north as New Jersey where planting usually begins in mid March. By April, dry weather helped planting progress in most areas, however, cool weather slowed plant growth and expected harvest dates were pushed back more. Fresh vegetable prices, particularly lettuce and tomatoes, were sharply higher than a year earlier, peaking in May. By June summer vegetable harvests were beginning in a wide spread area of the U.S. At the same time, harvest of late planted vegetables in California and the east coast began, causing large supplies of fresh vegetables in the markets. Prices began to decline but have remained above 1992 levels. The fresh vegetable CPI will average about 7.5 percent above 1992.

The cold weather also effected production of cattle and hogs. Wet muddy conditions in feedlots along with cold temperatures retarded weight gains in cattle. The number of cattle going to slaughter was slowed with very few cattle finishing that would grade choice. The CPI for beef and veal continued to climb until it peaked in May when warmer dryer weather brought better conditions in feed lots and cattle began finishing at a faster rate. Retail prices began to decline but remained well above levels of a year earlier. Cold weather also slowed weight gains in hogs. Time required for hogs to reach market weights increased, thereby, causing a slowdown in hogs going to slaughter. For all of 1993, beef prices will average about 4 percent above last year and pork prices will be up about 2.5 percent.

While we are on weather, what about the effects of the floods in the Midwest? The floods in the Midwest this summer had a minimal impact on the CPI for food in 1993. Most of the damage involved corn and soybeans, however, some vegetables for processing were lost in Wisconsin and Minnesota. Shoppers may find higher prices for canned and frozen peas, green beans, and sweet corn. Higher prices for these vegetables alone will have a negligible effect on the CPI for food.

A Look at 1994 Food Prices

In 1994 the general economy is expected continue to expand at a somewhat faster pace than in 1993. The employment situation will improve slightly, signaling only a slight improvement in consumer confidence. As a result, consumer demand will strengthen very little from current levels. The general inflation rate is expected to also remain near 1993 levels.

The CPI for all food in 1994 is expected to rise 2 to 4 percent above 1993 and food sold in grocery stores, up 1 to 3 percent. Factors from the general economy indicate little upward price pressure from consumer demand. Costs of processing and distributing foods will rise modestly and may not totally be passed on to consumers considering the relative weakness in consumer demand. The farm value of food will have a price impact on a few major food categories because of the outlook for shorter supplies in 1994. While consumer demand will remain lackluster for most of the food industry, some recovery in the away-from-home market will likely lead to increased menu prices. Operating costs have been inching up slowly this year, prices have remained relatively stable, therefore, margins have been eroding. Any increase in demand will likely mean some higher prices in restaurants. Competition will continue to keep price increases moderate among fast food firms. The Food away-from-home component of the CPI is expected to rise 2 to 4 percent in 1994.

Meats

Beef production is expected to rise 3 to 4 percent in 1994, resulting in 2 to 4 percent decrease in the CPI for beef and veal. In contrast, pork production will remain very near 1993 levels and the CPI for pork will increase 2 to 4 percent. Red meat supplies in total will be larger, and lower beef prices will more than offset higher pork prices. The CPI for red meats, therefore, is expected to average up to 2 percent below 1993 levels.

Poultry

Broiler production will continue to grow near the 5 percent rate in 1994. Returns to broiler producers have been favorable and are expected to remain so despite the outlook for higher feed prices. Turkey production, however, has been lower this year and is not expected to grow significantly in 1994, as producers look for higher prices and improved returns. The CPI for poultry will likely decline slightly in 1994 considering larger supplies of broilers and larger supplies and lower prices of competing red meats.

Fruits

Smaller crops of apples, oranges, and other fruits will lead to higher retail prices for fresh fruit in 1994. The 1993 fall apple harvest was down about 2 percent from last season. Most of the decline was in the eastern states, signalling higher prices for processed apple products. The Washington State apple crop was very near last season's crop and quality has been good. Lower total production and good quality, will mean higher retail prices for fresh apples in 1994. Orange production is also down from last year. The California navel crop is down an estimated 13 percent.

The Florida orange crop is also down from last year's record large crop. Smaller supplies this year in Florida will mean higher retail prices for orange juice. While the total orange crop is down this year, it is still 23 percent larger than the crop 2 years ago. The CPI for both fresh and processed fruits is expected to increase 3 to 5 percent from 1993 levels.

Vegetables

A smaller potato crop in 1993 will mean tighter supplies of potatoes in 1994. Potatoes for fresh market will compete with strong demand from processors making potato chips and frozen potato products. Smaller supplies, therefore, will mean higher prices in 1994. Lower prices in 1994 for tomatoes, lettuce, and other fresh salad vegetables will partially offset higher potato prices. Fresh vegetable acreage has expanded substantially this fall, and larger supplies are expected to result. The CPI for fresh vegetables is expected to rise 2 to 4 percent in 1994, following a more than 6 percent increase this year.

Dairy

Milk production in 1994 is expected to increase slightly from 1993. While farm prices will likely average below 1993 levels, retail prices will average 1 to 3 percent higher. Increased export demand for processed dairy products will keep per capita domestic supplies at or slightly below 1993 levels. Domestic demand for dairy products is expected to remain stable in 1994, therefore, the expectation of slightly lower domestic supplies will cause retail prices to also rise modestly.

Cereal and Bakery products

The CPI for cereals and bakery products will rise at a slightly faster rate than that for most other food categories in 1994. Demand for cereal and bread seems to strengthen, even when demand for most other products is lower. Consumers still perceive a bowl of cereal as a relatively inexpensive meal; it is easy to fix, and it is considered a healthy food. In addition, the shelf price of a box of cereal may not be the actual price. Couponing, and double couponing in some markets, can reduce cereal prices considerably. Most of the costs to produce breakfast cereal and bread products are for processing and marketing, more than 90 percent in most cases. These costs usually change more with the general inflation rate leaving the farm ingredients relatively a minor consideration. The CPI for cereals and bakery products is expected to rise at a rate of 3 to 5 percent in 1994.

Fats and Oils

The flood in the Midwest and the drought in the Southeast damaged the soybean crop. Oil production, however, will be down only about 0.4 percent from 1993. Domestic use of oil will be down less than 1 percent. The CPI for fats and oils increased less than half a percent this year and it declined 1.4 percent last year, all because of large oil supplies. With smaller supplies in 1994, some increase in fats and oil prices is expected in the 2 to 4 percent range.

Changes in Food Price Indicators, 1991 through 1994

	1991	1992	--Forecast--	
			1993	1994
Consumer Price Indexes			Percent	
Food	2.9	1.2	2.0	2 to 4
Food away from home	3.4	2.0	1.8	2 to 4
Food at home	2.6	0.7	2.2	1 to 3
Meat, poultry, and fish	2.3	-0.8	2.8	0 to -1
Meats	3.1	-1.4	2.7	0 to -2
Beef and veal	2.8	-0.1	3.2	-2 to -4
Pork	3.3	-4.7	3.0	2 to 4
Other meats	3.7	0.2	1.2	0 to -2
Poultry	-0.8	-0.1	3.1	0 to -2
Fish and seafood	1.1	2.3	3.0	1 to 3
Eggs	-2.3	-10.6	8.5	-3 to -6
Dairy products	-1.1	2.7	1.2	1 to 3
Fats and oils	4.3	-1.4	0.4	2 to 4
Fruits and vegetables	4.6	-0.3	1.4	2 to 4
Fresh fruits	13.5	-5.0	-0.1	3 to 5
Fresh vegetables	2.2	2.3	6.3	2 to 4
Processed fruits & vegetables	-1.9	2.7	-1.5	2 to 4
Processed fruits	-3.7	4.5	-3.6	3 to 5
Processed vegetables	0.8	0.2	1.6	1 to 3
Sugar and sweets	3.7	2.9	0.3	1 to 3
Cereals and bakery products	4.1	3.9	3.6	3 to 5
Nonalcoholic beverages	0.5	0.2	0.0	0 to 1
Other prepared foods	4.5	2.2	2.6	2 to 4

Source of historical data: Bureau of Labor Statistics; forecasts by Economic Research Service.

What happens to food prices when feed prices rise?

Flooding in the Midwest and drought in the Southeast considerably reduced this year's corn crop. The November 10 Crop Production Report has reduced the estimated 93/94 corn production to 6.5 billion bushels from original estimates of closer to 8 billion bushels. The corn price estimates as

reported by the World Ag Supply and Demand Estimates increase 15 cents to a range of \$2.35 to \$2.75 per bushel. These changes can impact meat production and retail prices in 1994 with residual effects in 1995.

Cattle that will be slaughtered in 1994 are, for the most part, in place. Higher feed prices will mean lower prices for feeder cattle, nevertheless, those animals will still be slaughtered in 1994. Therefore, the outlook for beef production in 1994 is not likely to change. There is a chance that cow/calf operators will cut back on feeder cattle production which would lead to lower beef production in 1995. If so, some cow liquidation will occur and beef production will most likely increase in 1994 meaning lower retail prices. Dairy cows could also be culled if feed prices rise. Quality and quantity of forage is an important factor as to how much cattle liquidation will take place since grain is primarily a feed supplement for cattle outside of feed lots.

Hogs that will be slaughtered in 1994 are largely in place for the first half of the year. If feed costs threaten profitability, producers will cut farrowing and pork supplies could be tighter in the second half. Some liquidation of the breeding herd could also take place due to reduced profitability that would increase pork production in 1994 and depress prices. This would leave a smaller production base for 1995 and result in higher pork prices.

Poultry production will follow the flow, as production can be cut or increased in a relatively short time compared to cattle or hogs. With higher red meat prices, poultry demand will increase as consumers perceive it to be a better buy. Poultry prices will likely be sufficient for favorable producer returns and production will continue to grow.

What will happen in the livestock sector because of lower corn stocks and higher corn prices is still uncertain. In any case, meat prices will average lower in 1994, but could average lower than currently forecast if liquidation takes place. Still the CPI for food in 1994 is forecast to increase in a range of 2 to 4 percent.

Outlook '94

For Release: Wednesday, December 1, 1993

FOOD PRICES AND RETAIL DEMAND: A MACROECONOMIC PERSPECTIVE

Paul T. Prentice, Ph.D.
President
Farm Sector Economics, Inc.

Good morning to you all. For those of you who ski, I bring fresh powder greetings from Colorado. For those of you who don't ski, I bring my condolences. This morning I hope to complement Mr. Parlett's expert analysis of the economic factors underlying the outlook for food prices in 1994. Then I hope to broaden that analysis to include the outlook for the general economy, as it affects retail food demand.

I should tell you that I am not as sanguine as Ralph when it comes to the relative price of food. Note that I said the relative price of food. It is popular to speak of "food price inflation", but that is an economic misnomer. What we are talking about the relative price of a set of goods and services that is determined relative to other prices. Be that as it may, I think that we are in for an unpleasant surprise for both food prices and for general inflation in 1994. I didn't get a chance to review Ralph's numbers before coming here but I believe he is in line with a consensus of forecasters. But I believe food prices will rise a full percentage point faster in 1994 than indicated by that consensus. I look for a 3-4% increase.

Let me walk you through the analysis. Recall that economists identify two different types of inflation:

- Cost-push inflation
- Demand-pull inflation

Cost Push Inflation

We have heard a full set of forecasts for the cost side of the equation. Retail food prices are determined by the farm cost of the raw commodities and by the processing and distributing costs of getting that food to final market. And that final market can be anything from a roadside stand to a restaurant. I think the consensus has underestimated both cost components for 1994.

First, I think prices of fruits and vegetables have been underestimated. The midwest floods caused substantial damage to these crops in Iowa, Illinois, Michigan, Wisconsin, and Minnesota. We have been so focused on the damage to grain that we have overlooked these

crops. In addition I think prices in the meat complex have been underestimated. High feed costs will significantly slow the increase in total meat supplies, especially by the second half of 1994. This will cause prices to rise. When we include higher prices for those two sets of commodities we will see a 3-4% rise in the overall farm component of retail food prices.

The second cost component of retail food prices is all the processing, packaging, shipping, storing, and retailing that goes into food-at-home, as well as the extensive further preparation that goes into food-away-from home. These costs will also rise faster than the consensus is expecting. I believe we will also see a 3-4% rise in the overall marketing component of retail food prices. Between these two components, we will see retail food prices up 3-4% in 1994. But in order to explain that non-farm component of cost-push inflation we have to turn to a discussion of the broader economy, eventually leading us into the domain of demand-pull inflation.

Demand-Pull Inflation

I believe the economy is much stronger than many realize. In fact, after so many years of sub-par growth we have become used to it. But there are many signs of a classic business-cycle recovery in the making, right out of the textbook:

- Strong auto market
- Strong housing market
- Rising capacity utilization
- Rising backlog of factory orders
- Rising employment along with stagnant unemployment

Auto sales in late-November were up 20% from a year ago. Housing starts in October were up 14% from a year ago. Industrial activity was at 82% of capacity in October, the highest use since 1990. The backlog of factory orders was up 1.4% in October, the fifth straight monthly rise. The civilian labor force rose 739,000 in October even as civilian employment rose 471,000. This indicates large numbers are reentering the labor force because work is available.

These signs, and more, lead me to believe that real GDP is now growing at an annual rate of 4-5%, and perhaps more. We will have an excellent Christmas retail season -- just short of an outright boom. Further the momentum will carry through the first quarter of 1994, and into the second quarter as well.

Now, this all sounds well and good. In many respects it is. Retail food demand will be strong, consumers will to some extent upgrade their purchases at grocery stores, and sales at eating and drinking establishments will pick up nicely. I see sales gains of 5-6% at grocery stores and 7-8% at restaurants. And strong productivity growth will help contain labor costs early in the year.

Sounds pretty good doesn't it. But it's not for nothing that economics is known as the "Dismal Science". By year end, costs will be rising throughout the economy. Labor markets will tighten, and we may have a higher minimum wage to boot. Product markets will tighten as capacity utilization pushes 85% by year end -- the traditional "flash point" for inflation. Even as the economy slows in the second half of 1994 and slows even more into 1995, costs will be on an upward spiral that will be difficult to stop.

So what's the problem? The problem is found in the causal factor underlying the strong demand. Is that demand fueled by strong exports? No. Is that demand fueled by strong job growth? That demand was created entirely by the Federal Reserve. In order to lower interest rates to the point of stimulating the economy, they had to pump up the monetary base by more than 10% per year for the last three years.

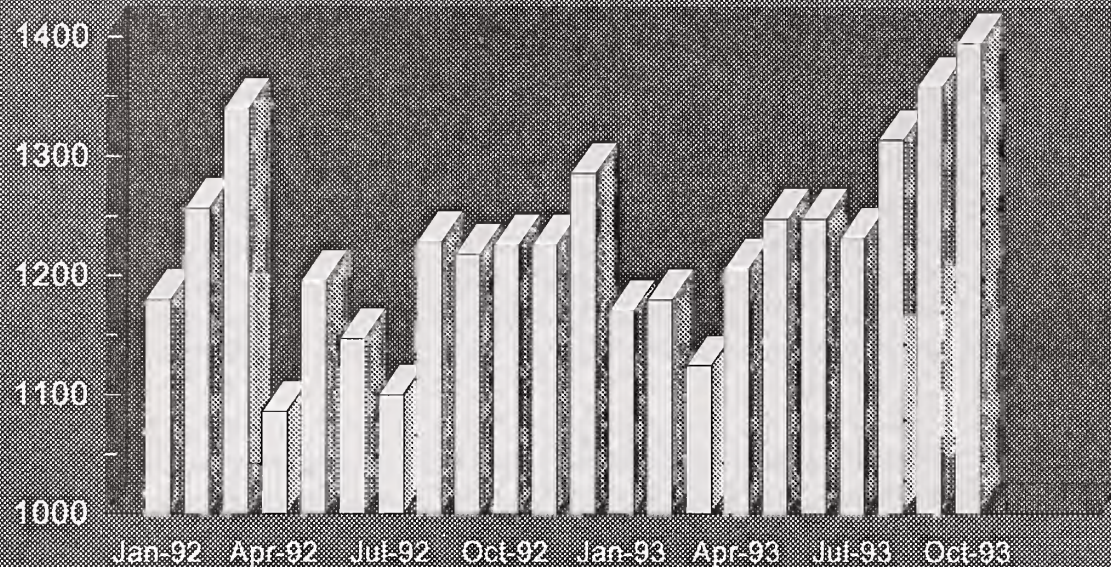
The economy is awash in liquidity. So far, it has found a home in the government bond market, pushing other money into the stock market. But that process is winding down. The artificial money will soon find a home in the broader economy, in the purchase of goods and services. Ultimately that money will find a home in the only place possible -- in the general price level.

This, ladies and gentlemen, is demand-pull inflation, inflation induced by monetary policy. It is a long-term phenomenon. But I believe we will see the first glimmer of it next year. Thus, my forecast for higher inflation ahead.

Thank you.

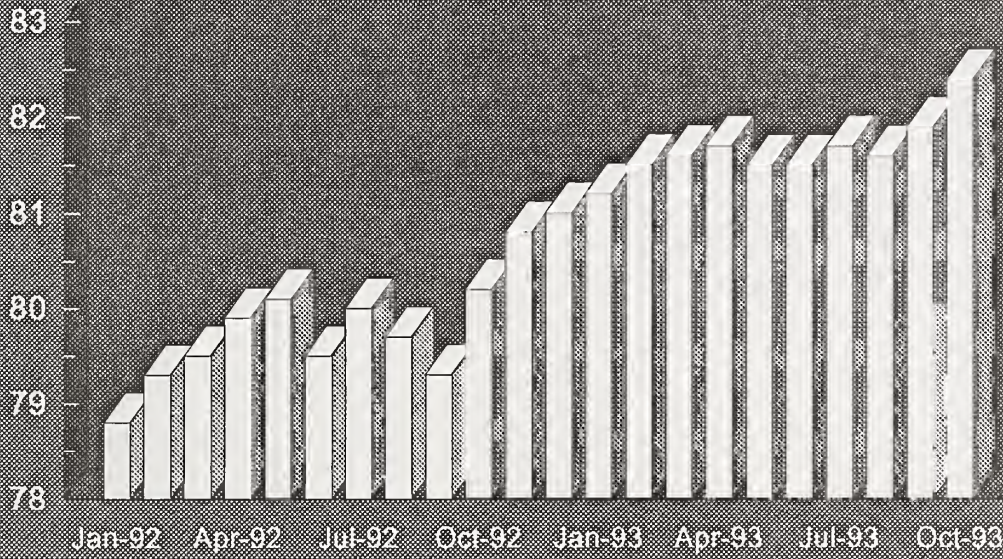
Housing Starts

Thousand Units



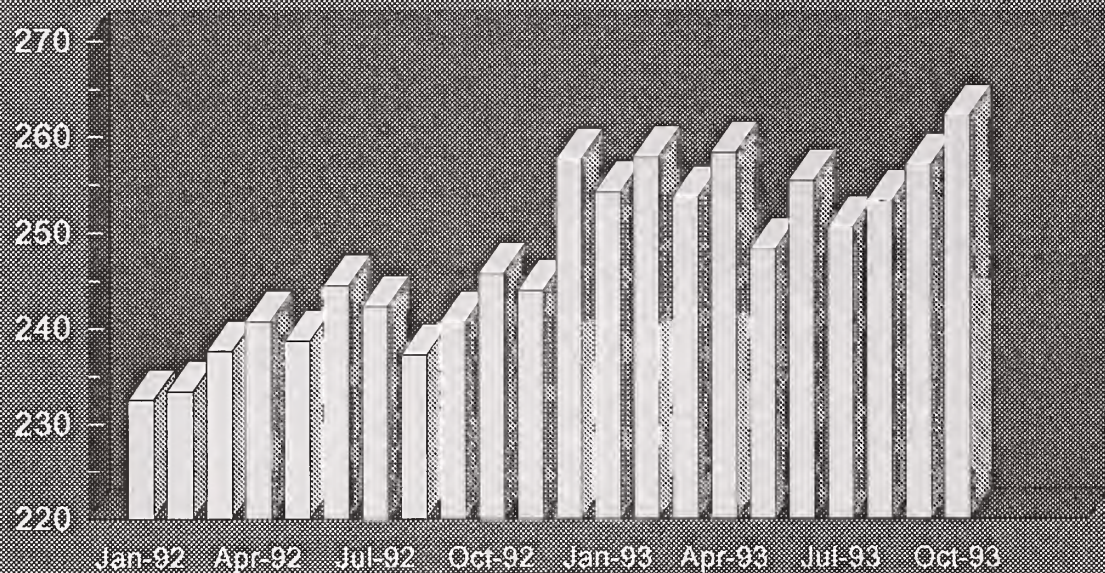
Capacity Utilization

Percent of Capacity



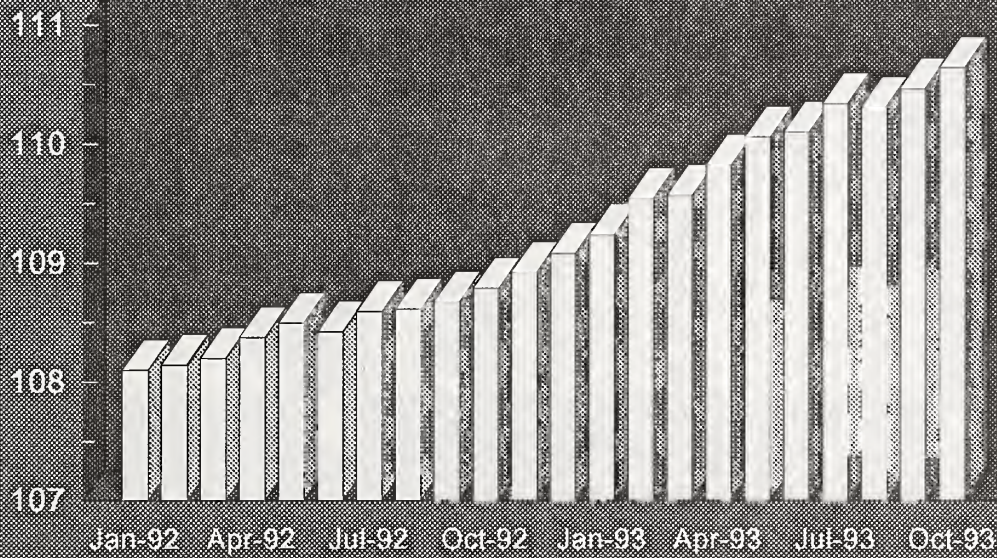
New Factory Orders

Million Dollars



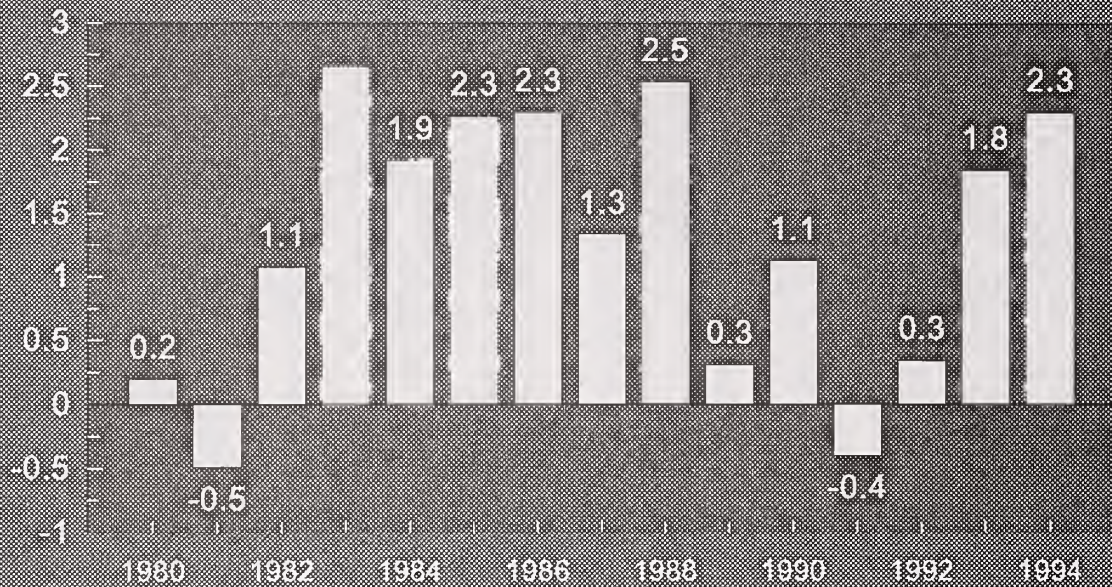
Nonfarm Payroll Employment

Million



Growth in Food Consumption

Percent



USDA 1994 OUTLOOK FOR FEED GRAINS

Thomas F. Tice & Peter A. Riley
Agricultural Economists
Economic Research Service

I. Introduction

Good Morning! Growing up on my family's farm in Kansas, I often heard my parents and neighbors using the expression "rain makes grain." In August 1992, I made a computer poster of that saying and hung it on my office door. After I returned from a trip home in late July this year, I was urged by my colleagues to retire the sign. However, I do expect to display that poster again--perhaps as soon as next summer!

I don't want to dwell too much on the events which have brought us to the current supply and demand situation for feed grains, but they do merit some discussion, since they have dramatically altered the market outlook relative to a few months ago.

II. Impact of Floods and Drought on 1993/94 Feed Grain Supplies

USDA's first projections for U.S. feed grains last May pointed to continued ample supplies for 1993/94. Production was projected at 245 million tons, and with carryin stocks forecast at 63 million, supplies were projected to reach 310 million tons. Feed grain supplies were 312 million tons in 1992/93, following harvest of a record crop. The large projected 1993/94 supplies, combined with little change in total use implied carryout stocks would decline only marginally, exceeding 60 million tons. Ending stocks of corn were projected to remain in excess of 2 billion bushels. As a result, feed grain prices were expected to remain near year earlier levels with farm corn prices forecast to average near \$2.05 per bushel.

However, the outlook for supplies deteriorated from that point on. Spring field work was delayed by wet conditions which persisted from last fall through the winter. A cool, wet spring hampered field work in the Corn Belt and Plains States until the last half of May. Only 40 percent of the corn crop had been planted on May 16, compared with an average rate of about 75 percent. Rains returned to the Midwest early in June and persisted through August. As a result, some crops did not get planted and some were destroyed by the floods.

However, floods and the problems associated with excessive moisture were not the only maladies affecting feed grains this season. Excessive dryness gripped much of the eastern and southeastern States, causing reduced yields and higher than normal abandonment or cutting for silage. Feed grain yields in 1993/94 are forecast at 2.3 million tons per acre, 20 percent below last year's record. Forecast corn yield of 103.1 bushel per acre are down 22

percent, sorghum yields of 63.6 bushels are down 13 percent, barley yields of 58.9 bushels are down 6 percent, and oats yields of 54.6 bushels are down 17 percent from last year's records.

Lower harvested area of feed grains as a proportion of planted area has also contributed to lower production this year. Harvested corn acreage of 63.1 million is 87.5 percent of plantings, down from 90.9 percent last year. Feed grain area harvested of 83.7 million acres is 83.5 percent of planted area, down from 88.7 percent last year. This represents about 5 million additional acres of abandonment or cut for silage, compared with a year ago.

Feed grain supplies for 1993/94 are currently forecast at 258 million tons, 17 percent below a year ago. Corn supplies of 8.6 billion bushels are down 18 percent from a year ago and the lowest since 1983/84. Sorghum supplies of 795 million are down 15 percent, oats supplies are down 16 percent, while barley supplies are down only 1 percent from a year earlier.

III. Outlook for 1993/94 Feed Grain Demand and Prices

Feed grain use is divided into three categories, food, seed and industrial (FSI), feed and residual, and exports. Sharply lower feed grain supplies for 1993/94 will require lower total use. However, due to the unique characteristics of demand in each market, the adjustments will not be shared evenly.

Food, seed, and industrial uses have historically been insensitive to changes in supplies. In the post-1975/76 period, FSI uses have trended higher, uninterrupted even by the severe droughts in 1983 and 1988. FSI use of feed grains is forecast to increase by 1 million tons in 1993/94 to 45 million. FSI use of corn, which usually accounts for about 85 to 90 percent of total FSI uses of feed grains, is forecast to increase about 40 million bushels to 1.55 billion in 1993/94. The impact of the Clean Air Act Amendments of 1990, which increased demand for fuel ethanol, accounts for much of this growth in corn milling. FSI uses of other feed grains are expected to remain near last year's level.

Livestock producers who buy feed have only recently seen their costs rise. As a result, the latest livestock inventory and meat production statistics do not yet indicate a major decline in feed demand. Adjustments will be made, however, and feed and residual use of feed grains is expected to decline.

The latest *Hogs and Pigs* report indicated lower hog production in 1993/94. The December 1992-May 1993 pig crop was down 4 percent from a year earlier and the June-August 1993 pig crop was down 8 percent. In addition, farrowing intentions for September-November 1993 were down 3 percent from a year earlier. Thus, feed demand in the hog sector is likely to decline as pork production declines over the coming months.

Feed demand in the beef sector is expected to remain strong, since the number of cattle on feed are expected to remain above a year earlier. Cattle on feed October 1, 1993 were 9 percent higher than last year, while yearling feeder

cattle supplies outside feedlots were down 12 percent. Feeder calf supplies continue to show a modest increase with calf supplies outside feedlots up 1 percent from a year ago. Higher prices for feed, excellent pasture and range conditions in most areas on November 1, 1993, and a good start on winter wheat may encourage holding cattle on pasture longer next spring, reducing the grain feeding period. Nevertheless, larger numbers of cattle are expected to keep feed demand in this sector strong.

Poultry output is expected to rise in 1993/94 as broiler producers continue to increase the number of eggs set and chicks hatched. Broiler production is forecast to increase about 5 percent in 1993/94 as producers have responded to favorable returns to date. Higher feed prices may hamper this growth rate. Since broilers convert feed very efficiently, their grow rates are generally less affected relative to other livestock sectors. Turkey production is forecast to increase about 1 to 2 percent in 1993/94.

Including all livestock classes, the index of grain consuming animal units in 1993/94 is expected to be about 1 percent higher than last year. However, feed use, expressed in feed and residual per animal unit, is expected to fall. Feed and residual use of feed grains is expected to decline about 7 percent in 1993/94. Corn is expected to account for all the loss, declining 450 million bushels or 8.5 percent. Higher prices for feed grains are expected to boost wheat feeding in 1993/94, especially following the wheat harvest next summer. On an September-August year, total feed and residual disappearance of wheat and feed grains in 1993/94 is forecast at 153 million tons, down about 3 percent from 1992/93. Feed and residual use of grains would be about 1.8 million tons per animal unit, about the same as in 1991/92 but well above the 1.6 million in 1983/84.

The prospects for coarse grain trade in 1993/94 are weak. Although global coarse grain supplies in 1993/94 are forecast to decline almost 55 million tons, most of the decline is due to the smaller U.S. crop. However, higher foreign production is forecast to push foreign coarse grain supplies higher. With foreign consumption to remain about the same as in 1992/93, world coarse grain trade is expected to decline about 3 percent to 85.7 million tons. A prospective drop in corn exports will be partially offset by a significant gain in barley exports. World coarse grain ending stocks are forecast to fall 43 million tons, with most of the decline occurring in the United States. This would be the lowest carryout stocks since 1983/84, while the ratio of global stocks-to-use is forecast at 13.9 percent, the lowest since 1973/74.

The outlook for U.S. feed grain exports is poor due to the small U.S. crop, weak global import demand, and increased competition. Among major competing exporters, production is up in Canada, China, Australia and the EC. The largest gain is in Canada as more normal growing conditions supported higher yields and harvesting of a larger area. Canada's barley crop is up 21 percent and corn up 39 percent. China's corn exports are expected to increase 4 percent and reach a record for the fourth consecutive year. China is currently the largest foreign corn exporter.

U.S. feed grain exports in 1993/94 are forecast at 42.6 million tons, down 17 percent from estimated 1992/93 exports. Smaller corn exports, forecast at 1,350 million bushels account for most of the decline, but sorghum exports are also forecast to drop 27 million bushels to 250 million.

Based on the above analysis, total feed grain use is expected to decline 20 million tons, or 8 percent, to 230 million. Ending stocks in 1993/94 are forecast at 28 million tons, about 35 million lower than carryin stocks and the lowest since 1975/76. Forecast ending corn stocks of 881 million bushels would be the lowest carryout since 1975/76 and just 11.4 percent of projected 1993/94 use. Ending stocks of sorghum, forecast at 78 million bushels, would be the second lowest since 1975/76, while barley stocks, forecast at 117 million and oats stocks, at 91 million, would be the lowest in the last 20 years.

The extremely low carryout stocks of feed grains are expected to boost prices in 1993/94. Prices received by farmers for corn are forecast to average between \$2.35 and \$2.75 per bushel, up from \$2.07 last year. Sorghum farm prices are forecast to average between \$2.15 and \$2.55 per bushel, up from \$1.89 a year ago. Barley and oats prices are expected to increase only modestly due to the large portion of these crops already marketed. Barley prices received by farmers are forecast to average between \$1.95 and \$2.15 per bushel, compared with \$2.05 per bushel last year, and oats prices received by farmers are forecast to average between \$1.35 and \$1.45 per bushel, up from \$1.32.

IV. Outlook for 1994/95 Feed Grain Supplies

The first USDA projections of 1994/95 supply and demand of feed grains will be released next May. Today, I will talk about the prospects for the future, providing some insights to supply and demand conditions which are likely to exist next year within the context of what we know today. Negotiations continue on agricultural and trade policy in the Uruguay Round of GATT (General Agreement on Tariffs and Trade) while the North American Free Trade Agreement (NAFTA) has just received ratification by Congress. NAFTA is expected to have an impact on the U.S. feed grain outlook for 1994/95. However, the impact of a successful conclusion to GATT by the end of this year would depend upon the specific provisions and when they would go into effect.

Secretary Espy announced revisions to the 1994/95 corn program on November 15, 1993, that will encourage larger planted area in 1994/95. The Secretary used discretionary authority to further reduce the corn ARP to zero percent in response to revised forecasts of 1993/94 supply, demand and carryout stocks. Thus, producers are not required to set aside any feed grain acreage in 1994/95 to receive program benefits, the first time since 1981. However, unlike the 1981 program: 1) over 4 million acres of corn base will remain idled under the Conservation Reserve Program; 2) additional base acreage will likely be idled under the 0/92-85 provisions; and 3) participant plantings are limited to their base acreage plus flexible acres (up to 25 percent of other crop acreage bases) available on the farm.

Before discussing the prospects for feed grain demand, I want to examine the potential for production and supplies. Given the limited time, I will focus my comments on corn, since it accounts for most of the feed grain supply and use. However, we will be happy to address questions about sorghum, barley, and oats during the discussion period.

While lower feed grain set asides provide the potential for larger planting in 1994/95, market returns also play an important role. Flex acreage options for program crops allow program participants to adjust plantings more or less than changes in ARP's might imply. While many factors enter into producers' planting decisions, relative prices suggest that fewer soybeans may be grown on corn base acres next year. In the spring of 1993, the ratio between soybeans and corn farm prices averaged about 2.7-to-1. A soybean-to-corn price ratio above 2.5 to 2.6 generally shifts corn acres to soybeans in the Midwest. Farm prices during October 1993 resulted in a ratio of 2.6-to-1. Closing March futures prices for corn and soybeans on November 19, 1993, yielded a soybean-to-corn price ration of 2.4.

Relative prices between wheat and corn show a similar pattern. Generally, prices received by winter wheat producers just before and during most of the planting season were similar to a year ago. However, higher corn and soybean prices likely lead to some switching to these crops in parts of the Midwest. The ratio of average farm prices in March 1993 for winter wheat and corn in the Corn Belt (excluding Iowa) was 1.5-to-1, while in October it was 1.2-to-1. The wheat-to-corn ratio using closing March future prices for Chicago wheat and Chicago corn on November 19, 1993, was 1.2-to-1. A similar pattern holds for spring wheat prices relative to corn. If these patterns hold in the months ahead and barley prices follow corn prices higher, barley plantings could increase relative to spring wheat.

In addition to market returns and farm program factors, some acreage that was flooded last summer may not be in condition to plant next spring. For participating farmers, land in this category may be enrolled as 0/92 acreage.

When the above factors are taken together, corn plantings next spring could reach 79 to 81 million acres. This also assumes normal weather between now and next summer, allowing for a normal planting season. Assuming normal weather next summer and fall, harvested corn acreage could reach 71.5 to 73.5 million acres. Using a trend yield of 122 bushels per acre, 1994/95 corn production would be between 8,725 and 8,950 million bushels. Carryin stocks of about 900 million bushels plus expected production and imports would result in 1994/95 corn supplies between 9.6 and 9.9 billion bushels, up 1 to 1.3 billion but 0.7 to 1 billion below 1992/93 supplies.

V. Prospects for 1994/95 Feed Grain Demand

Increased FSI use of feed grains is expected to continue in 1994/95. The Clean Air Act Amendments of 1990 require ozone nonattainment areas to implement plans to reduce ozone formation starting in January 1, 1995. Ozone nonattainment areas, which include 9 major metropolitan areas, plus other regions which have indicated they will opt-in to the reformulated gasoline

program, account for about two-thirds of motor vehicle fuel used annually. One choice these areas have is to use reformulated gasoline, which is required to contain at least 2 percent oxygen by weight. This added demand for oxygenates, such as ethanol, will help boost FSI use of corn to almost 1.7 billion bushels.

Feed demand in 1994/95 will depend on how livestock producers survive the higher feed prices this year. Early spring 1994 development of pasture and forage crops may be necessary to carry some stock through these low supplies of feed grains. Based on our projection for 1993/94, cow-calf producers are not expected to initiate a liquidation of their breeding stock. Therefore, larger numbers of feeder animals are expected to be placed in feedlots. As a result, beef production in 1994/95 is likely to increase about 3 percent.

Pork production in 1994/95 is likely to be down 1 to 2 percent during the first half of the year, but may rebound in the last half in response to higher hog prices and lower feed prices. Feed demand by pork producers is likely to be down marginally to unchanged in 1994/95.

Poultry production is expected to grow again in 1994/95. Broiler producers are likely to increase production 3 to 5 percent as returns improve with lower feed costs. Turkey producers are also likely to expand production, but at about half the rate of broiler producers.

Total grain consuming animal units in 1994/95 are likely to increase slightly, as fewer hogs and milk cows nearly offset larger poultry and beef units. Therefore, demand for feed grains will increase in 1994/95. With larger supplies of corn, feed and residual use could rebound to 5.0-5.2 billion bushels.

An early look at export prospects for 1994/95 suggests little ground for excessive optimism. A rebound in the U.S. corn crop is likely to replenish supplies and pull down export prices, improving the U.S. competitive position. However, other factors in the international arena could mean a continuation of sluggish import demand for corn and other feed grains, while export competition remains intense.

The general plane of world coarse grain trade is expected to remain depressed by the absence of large imports by the former Soviet Union (FSU). In 1989-91, Soviet coarse grain imports averaged more than 20 million tons per year. In 1992/93, imports fell to about half this level, and most of this was purchased under credit, donated, or bartered. The contraction of the livestock sector in response to cuts in subsidies, higher prices, and economic weakness has reduced FSU meat consumption and feed grain use. No quick rebound appears likely, suggesting imports will remain weak.

There is a strong likelihood that supplies of relatively low priced wheat on the world market will remain large in 1994/95. This will mean continued strong wheat imports by South Korea. In addition, smaller amounts of wheat for feed could continue to move into other markets, depending on supply and relative prices.

Over time, import demand by the developing countries is expected to expand and offset the loss of Soviet trade. Impressive economic growth and increases in meat consumption are fueling higher demand for coarse grains in a number of countries, particularly in Asia and parts of Latin America. However, in 1994/95, assuming no large import spike due to a crop shortfall, world trade is likely to experience no more than modest growth.

The outlook for U.S. exports will also be shaped by competition with other exporters. As usual, the most questions revolve around China, the largest competitor corn exporter. In previous years, expectations were typically for China's exports to weaken in the belief that increased domestic demand would outstrip supplies. Given China's rising exports in recent years, it may be reasonable to assume continued strong competition, in the short to medium run.

As for other competitors, there is considerable variability in any given year. Argentina is gradually improving its competitive status through privatization and reforms. However, this path has been bumpy and no major surge in corn or sorghum exports is likely in 1994/95. The relative prices of coarse grains and oilseeds will be important in shaping Argentina's planting decisions. Corn exports by South Africa are very hard to judge, as the country tends to jump in and out of the export market due to large variability in weather. The EC is expected to remain the world's dominant barley exporter in 1994/95, despite some changes in agricultural policies. As it works down large stocks, the EC may still be able to export significant amounts of corn as well. At this point, barley export prospects for both Canada and Australia would appear to be relatively steady around current levels, assuming no major developments in the wheat market shift more acreage out of barley and into wheat, or vice versa.

This outlook would suggest some export growth for U.S. feed grains in 1994/95, especially in corn. U.S. corn export could increase modestly, perhaps 50 to 100 million bushels.

Based on the above assumptions and analyses, total corn use would be expected to recover in 1994/95 to about 8.3 to 8.4 billion bushels. With corn supplies in the 8.7 to 9.0 billion range, ending stocks in 1994/95 would likely build to around 1.3 to 1.5 billion bushels. Higher supplies and rebuilding stocks would suggest that corn prices would average below those expected in 1993/94 but higher than the \$2.07 in 1992/93.

VI. Weather Shock Scenarios

Corn yields have been quite variable since the early 1980's. Years with record or near record yields have been followed by significant production shortfalls. Therefore, we think it is useful to look at alternative scenarios to a normal weather event.

Let's examine the prospects of a second year of reduced yields, using the acreage assumptions already developed for 1994/95. A one standard deviation shortfall in yield from trend would imply average corn yields near 110 bushels per acre. This would produce a crop in the range of 7.9 to 8.1 billion

bushels, with supplies in a range of 8.8 to 9.0 billion. If total corn disappearance were to remain at the 7.8 billion bushels currently forecast for 1993/94, carryout stocks for 1994/95 would be between 1 and 1.2 billion bushels. Average farm prices for corn would continue strong, near the levels currently forecast for 1993/94.

One caveat to this scenario is the assumption of use. Two years of corn prices near \$2.50 and above would potentially have a significant impact on growth prospects for livestock producers. The pork sector would likely make the largest adjustments, as they and the poultry sectors are relatively intense users of feed grains. Beef cattle herd expansion has been slow and is in the early-to-mid-stages and has excess grazing capacity to help make adjustments to higher feed costs.

As we experienced in 1992/93, corn yields have the potential to significantly exceed trend. If yields were to reach the 1992/93 level, or 131 bushels per acre, corn production would rebound to 9.4 to 9.6 billion bushels, pushing supplies to 10.3 to 10.5 billion. Corn supplies in this range would cause farm prices to fall in 1994/95, allowing continued growth in the livestock sectors. Total disappearance in this scenario could increase to around 8.4 billion bushels, with ending stocks building to 1.9 to 2.1 billion bushels. Ending stocks in 1992/93 were 2.1 billion and farm prices averaged \$2.07 per bushel.

Outlook '94

For Release: Wednesday, December 1, 1993

THE DECLINE OF EXPORT CORN MERCHANDISING
Poor Demand And Subsidized Processing Have Permanently Changed Industry**John Stewart**
John P. Stewart, Inc.
Albuquerque, New Mexico**Summary**

In the last 10 years, these companies have either gone out of business in the US or sold their US elevator facilities. AGRI Industries, Cook Grain Co., The Early & Daniel Co., Farmers' Export Co., Garnac Grain Co., Gulfcoast Grain, Louis Dreyfus Co., and Pillsbury. Some of these companies had been in business in the US for 100 years and they all had one thing in common. Their facilities were used for merchandising grain destined for export and the principal grain was corn.

In October, the *New York Times* ran a series of three articles under the heading "Tainted Trade". These articles were what the *Times* considered an expose of USDA-managed credit programs and said that, from 1986 through 1989, these programs had "enriched" four multinational companies with \$1.38 billion in export subsidies. In a supreme bit of irony, of the four companies mentioned, one was the Louis Dreyfus Co. noted above and another the Feruzzi Group, which is in financial reorganization and has announced that by 1997 it will cease grain operations in the US.

As anyone in the business knows, the export subsidies described by the *Times* primarily benefit producers. Export grain merchandisers pay a much higher price to producers than they receive from foreign buyers and the subsidies are simply reimbursement for the loss. Furthermore, grain subsidies apply almost exclusively to wheat; corn receives no export subsidies at all. Corn exports have dropped from 2.4 billion bushels in 1980 to 1.4 billion bushels forecast in 1993.

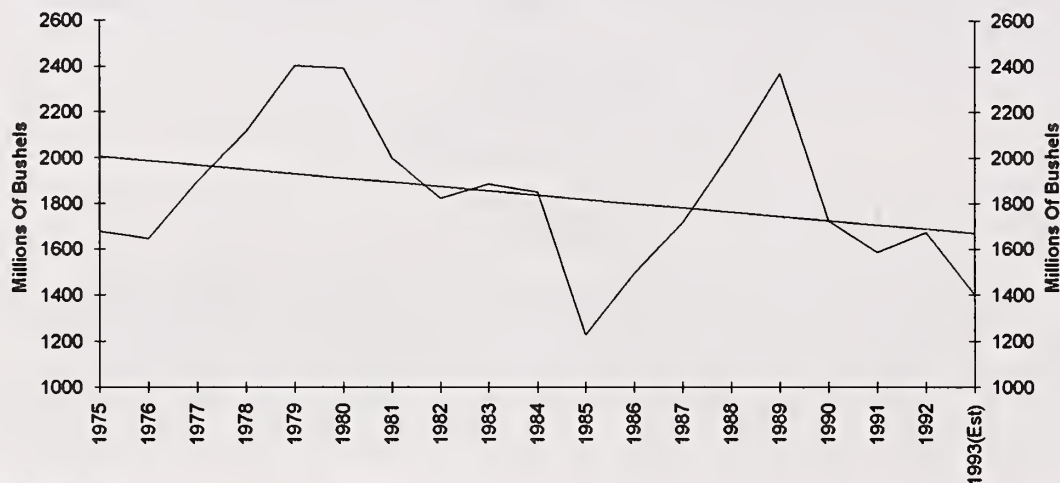
The companies who have prospered have adapted to serve the domestic market. Domestic corn processing, an industry that is indirectly subsidized by the government, has tripled since 1975 from 500 million to 1.5 billion bushels and domestic feed use, primarily because of growth in the broiler industry, has grown from 3.6 billion to 5.0 billion bushels.

Decline In Corn Exports

US corn exports peaked in 1979 and 1980, at 2.4 billion bushels. Since then, the trend has been down for a number of reasons. In chronological order, the most important

are 1) the worldwide credit collapse of the early 1980's which took Eastern Europe out of the market as a buyer, 2) the EEC's enormous production subsidies paid to its farmers turning the EEC from an importer to an exporter of 20 MMT of grain annually, 3) China's appearance as a corn exporter to the Pacific Rim and 4) the collapse of the Soviet Union.

US CORN EXPORTS

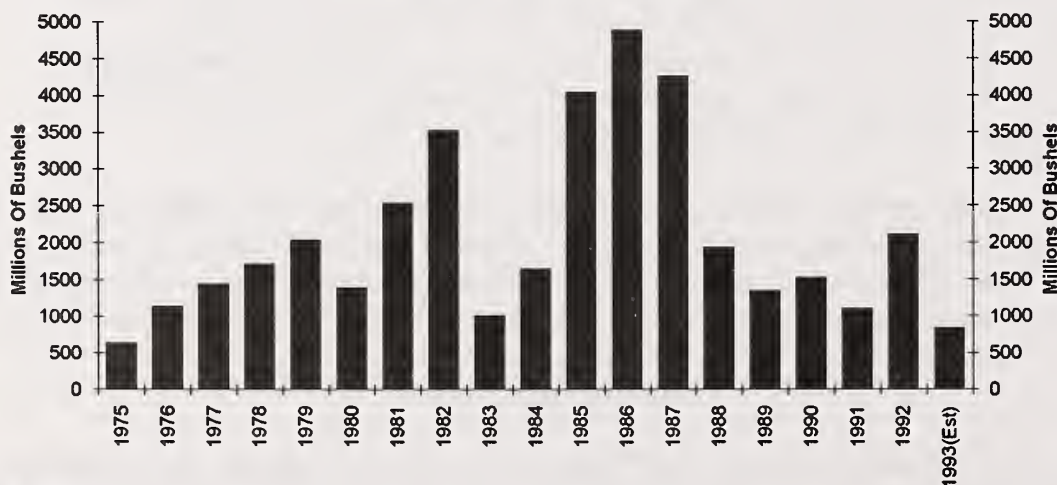


libcom(disk5)\cnextp2

Accumulation Of Burdensome Corn Stocks

Because of high loan rates from 1980 to 1985, US corn prices did not fall enough to compete effectively in the export market. Instead, large left-over stocks of corn accumulated in government support programs. In 1986, 2.1 billion bushels of corn were in the loan, 1.3 billion bushels in the Farmer-Owned-Reserve and 1.4 billion bushels in CCC's inventory which, of course, created considerable expense for the government.

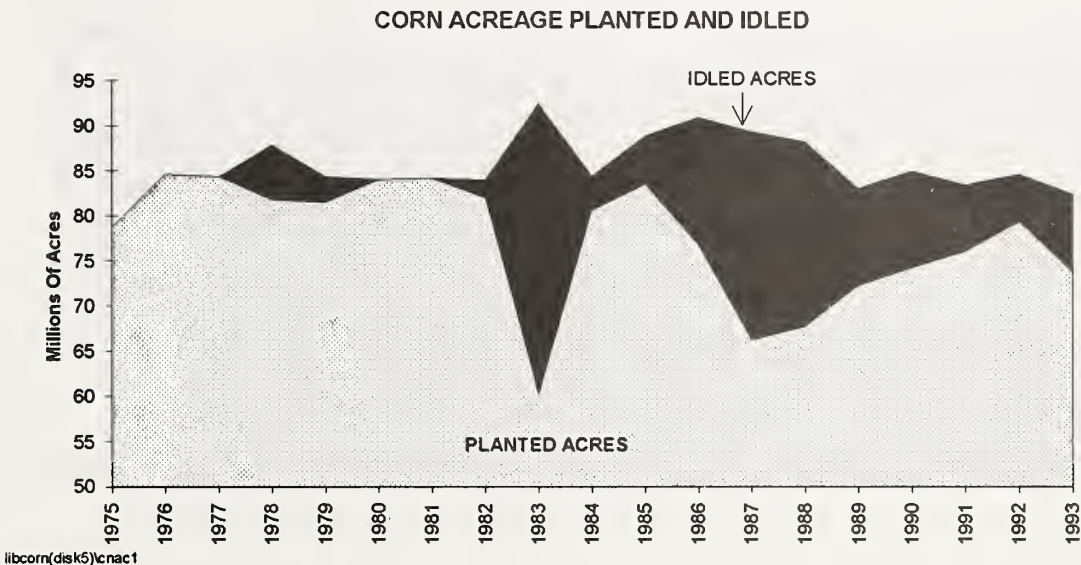
END OF YEAR CORN STOCKS



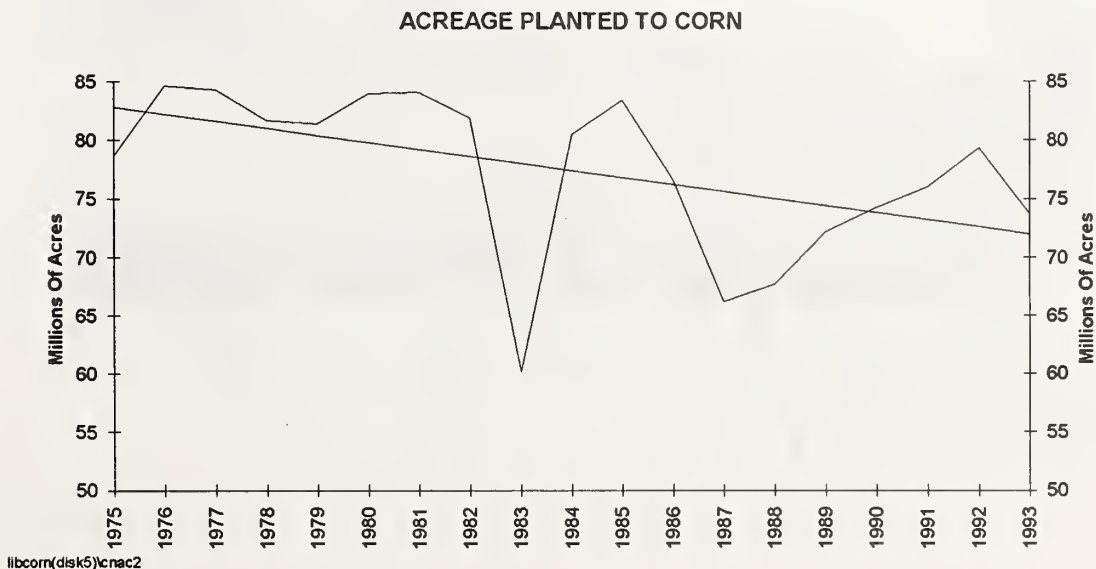
libcom(disk5)\cnstis1

Acreage Idling Programs

In order to contain the cost of its price support programs, the government implemented various acreage reduction programs to reduce production. The most aggressive of these was the PIK Acreage Reduction Program of 1983 wherein farmers were paid to take 32 million acres of corn base out of production.



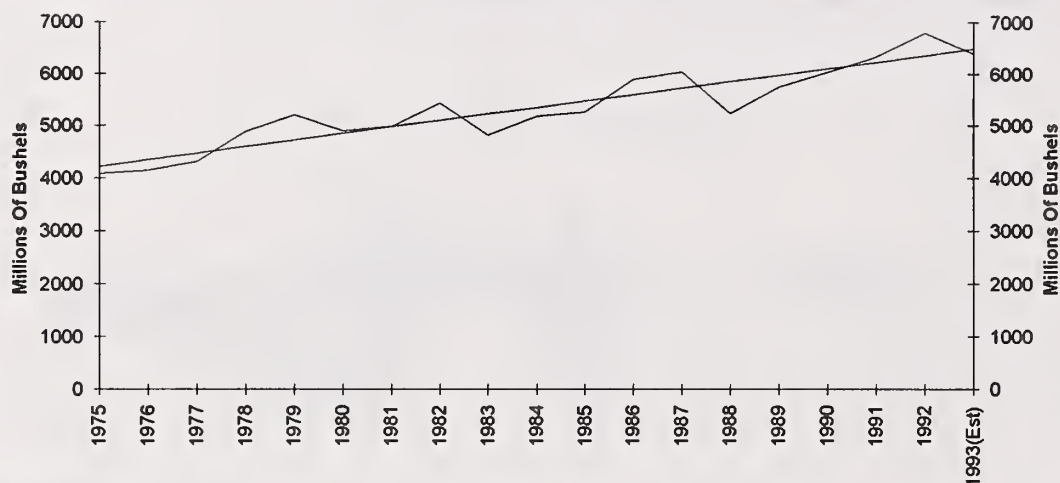
Sizable amounts of corn base have been idled since 1983 and the trend in corn acreage has been down.



Domestic Use

Domestic use of corn has been growing steadily.

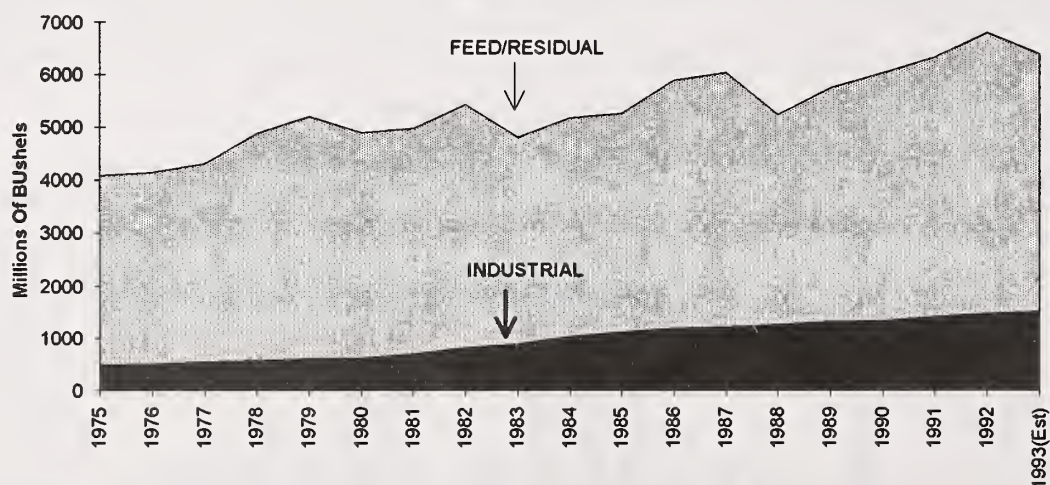
DOMESTIC CORN USAGE



LIBSTEXPDOMUSE2

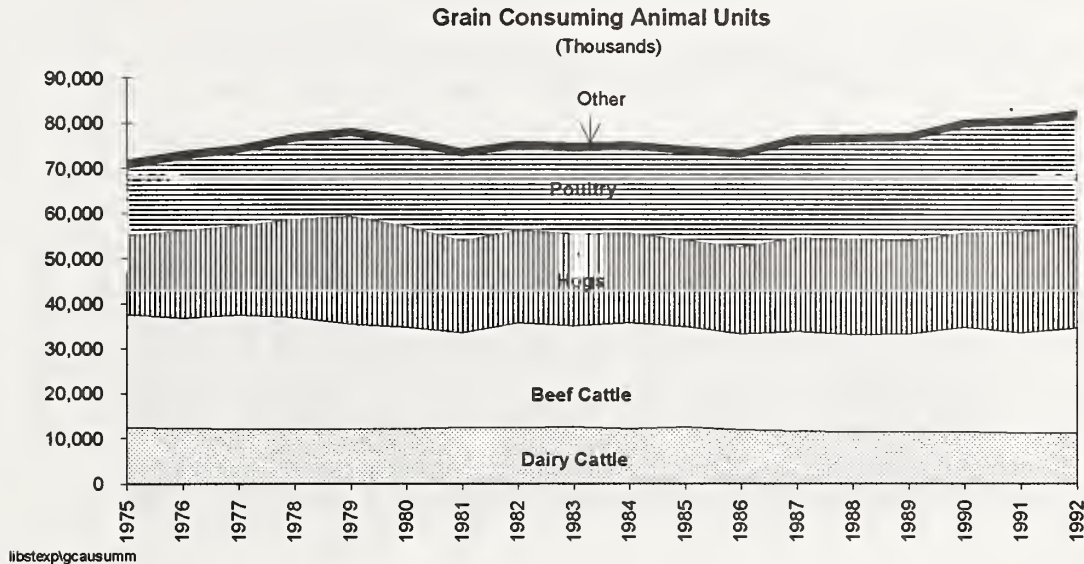
Feed and residual use has grown by 1.5 billion bushels or 42% since 1975. Industrial use has grown by 1.0 billion bushels or 200% during the same time.

CORN DOMESTIC USAGE

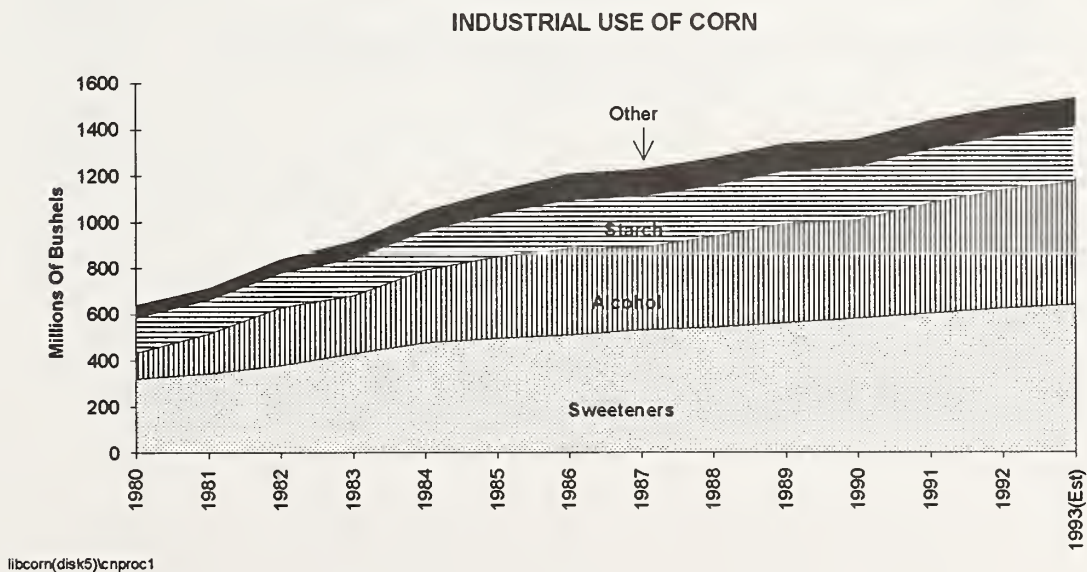


libsyexpdomuse1

Stated as Grain Consuming Animal Units, the common denominator defining animals in terms of grain consumption, poultry numbers have grown by 66% and hogs by 26% since 1975. Poultry, primarily broilers, is now the second largest consumer of feed grain in the US. Cattle is still the largest, but their numbers have actually declined by 7% since 1975.



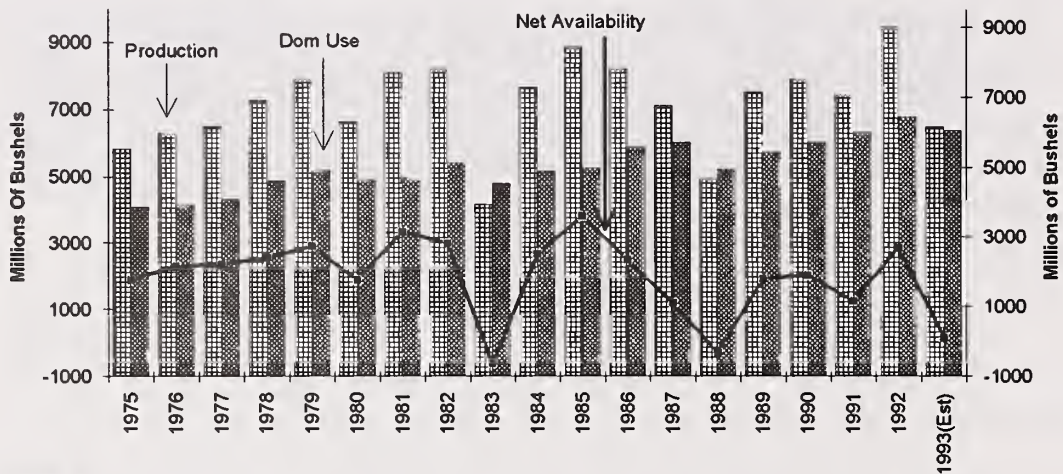
About 300 million bushels of the growth in industrial use was for production of high fructose corn syrup and about 400 million bushels was for production of ethanol. Ethanol, of course, benefits from tax exemptions for fuel use and HFCS is indirectly subsidized by the price supports given to sugar.



Net Availability Of Corn For Export

As domestic use has grown and production has been constrained by acreage controls, the net amount of corn available for export, i.e. the excess of production over domestic use, has been shrinking.

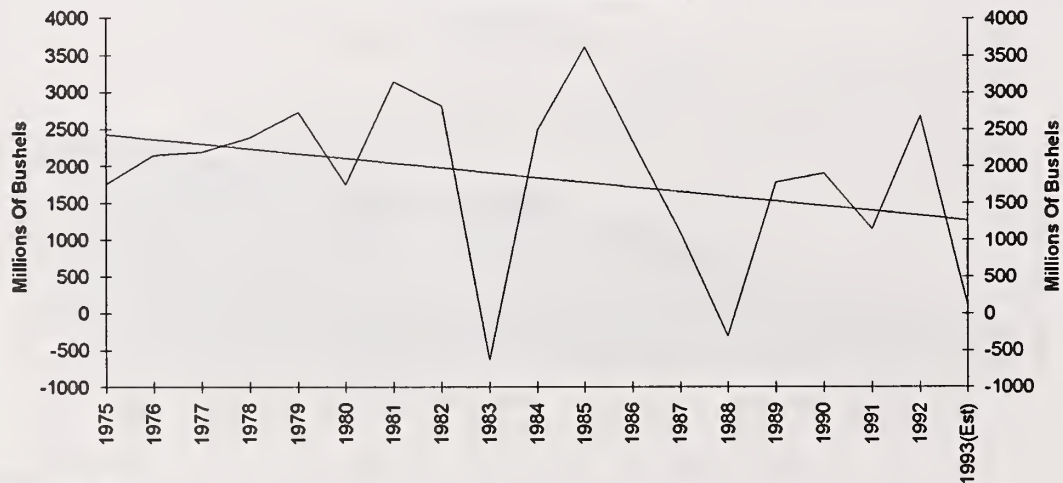
US Production, Domestic Use & Net Export Availability Of Corn



libstexplucpduse1

NET EXPORT AVAILABILITY OF CORN IN THE US

(Production Less Domestic Use)

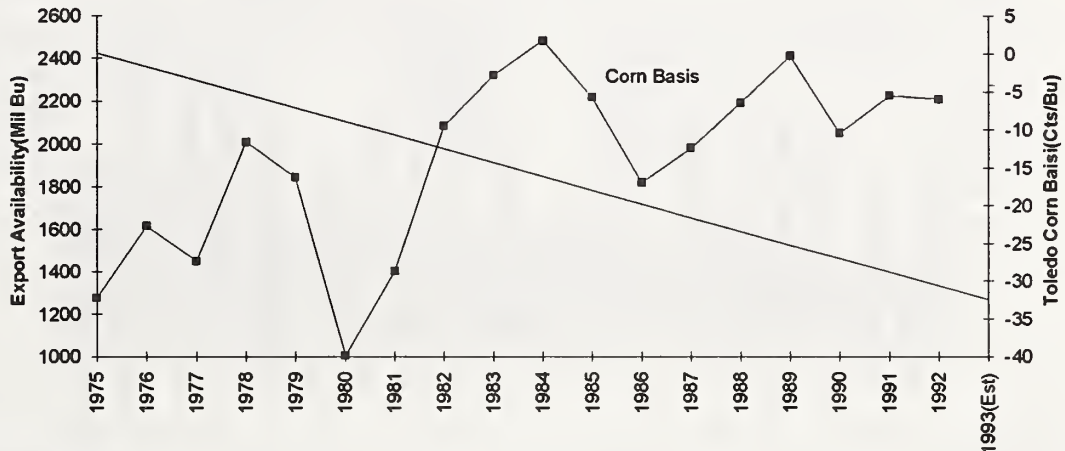


LIBSTEXPIUCPDUSE2

Profitability Of Merchandising Export Corn

In short, by restricting acreage and subsidizing processing, current government programs attempt to support the price of corn by reducing the net amount available for export. As the net availability of corn for export has declined, the corn basis has tightened. An example is shown with the Toledo corn basis in the chart below.

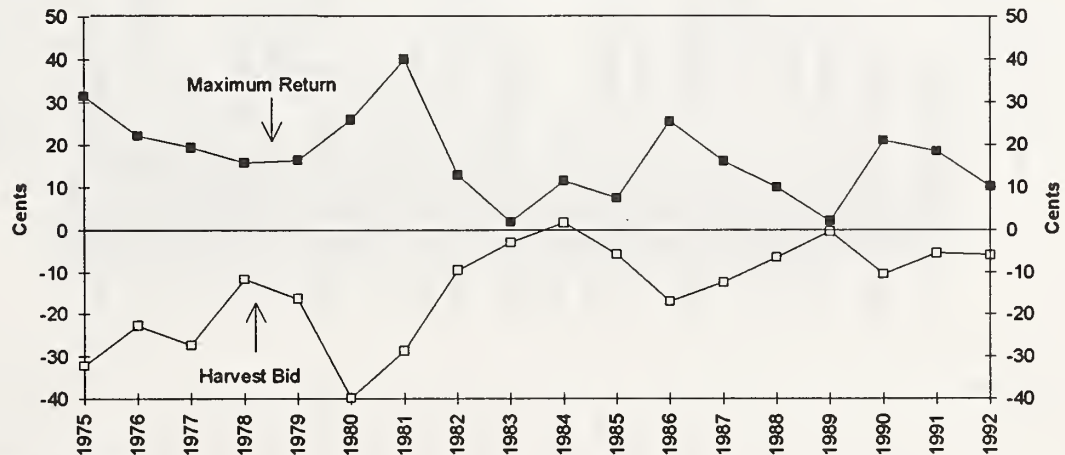
TREND IN EXPORT AVAILABILITY OF CORN COMPARED TO TOLEDO FALL CORN BASIS



LIBSTEXPUCPDUSE3

Unfortunately for corn merchandisers, their profits come from the margin that is available in the corn basis for handling and storage. The chart below shows the maximum return to storage available to an elevator in Toledo compared to the fall corn basis. The tighter the basis, the smaller the return, and the trend has been against the elevator.

#2YC AVERAGE TOLEDO HARVEST BID COMPARED TO THE MAXIMUM RETURN TO STORAGE
Weekly Closing Prices

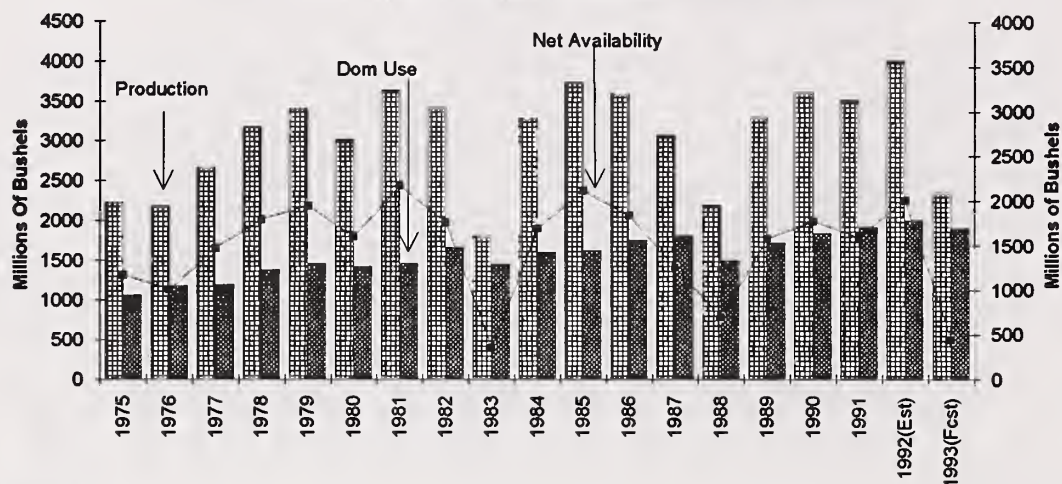


libprice(disk #3)tolecrn1a

Net Availability Of Corn By Region

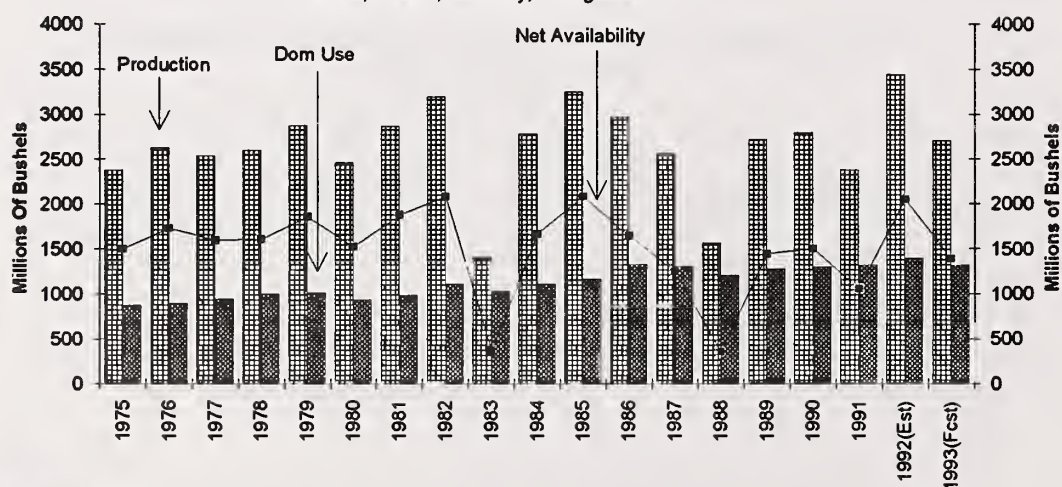
More acreage is eligible to be planted to corn under government programs in the western corn belt than in the eastern corn belt. Consequently, the net availability of corn has been greater in the west than in the east.

Production, Domestic Use & Net Availability Of Corn In Western Corn Belt
Iowa, Minnesota, Nebraska & Wisconsin



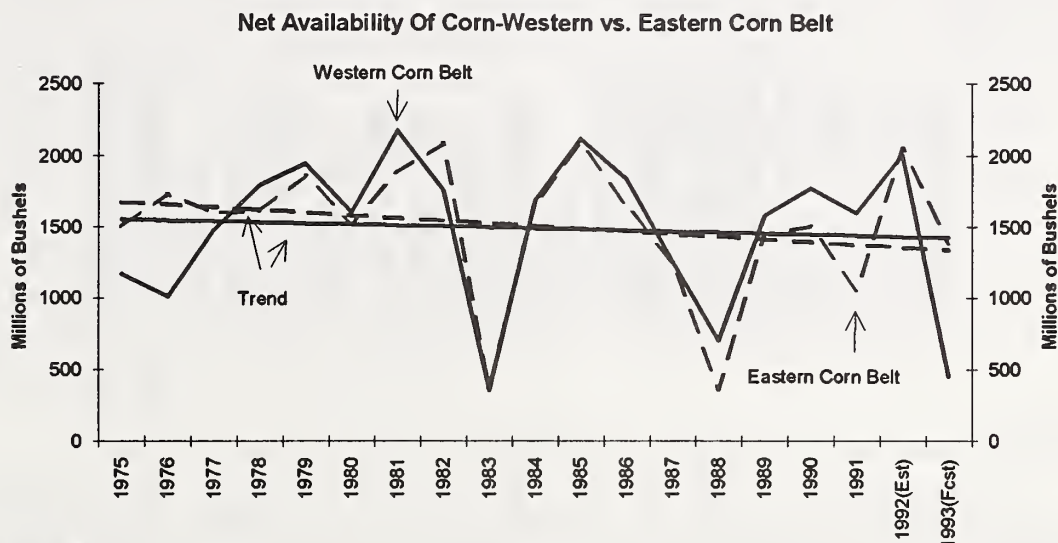
libstexpwcnpduse

Production, Domestic Use & Net Availability Of Corn In Eastern Corn Belt
Illinois, Indiana, Kentucky, Michigan & Ohio



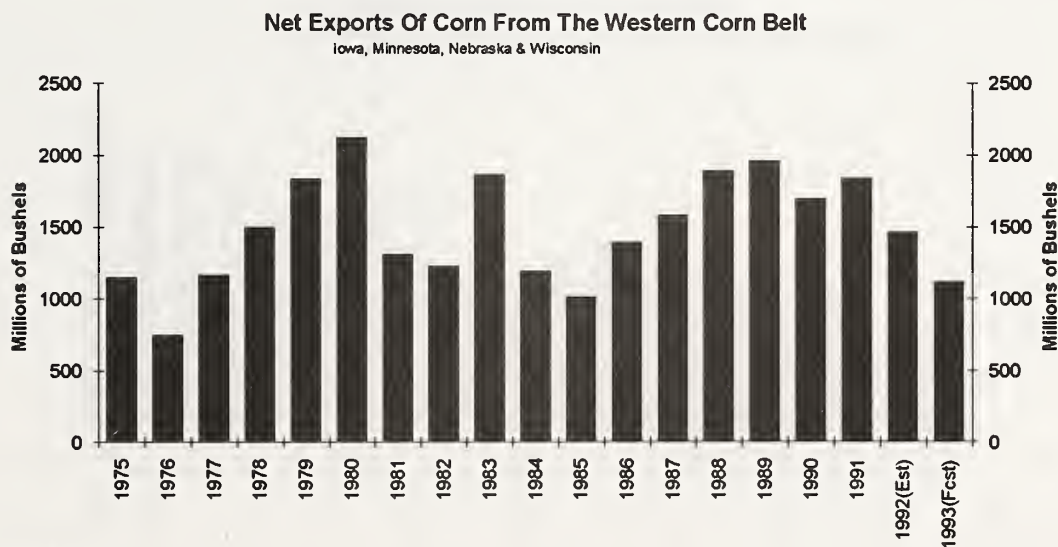
libstexpncnpduse

The downtrend in net availability of corn has been more pronounced in the eastern than in the western corn belt.



libstexpwcnava

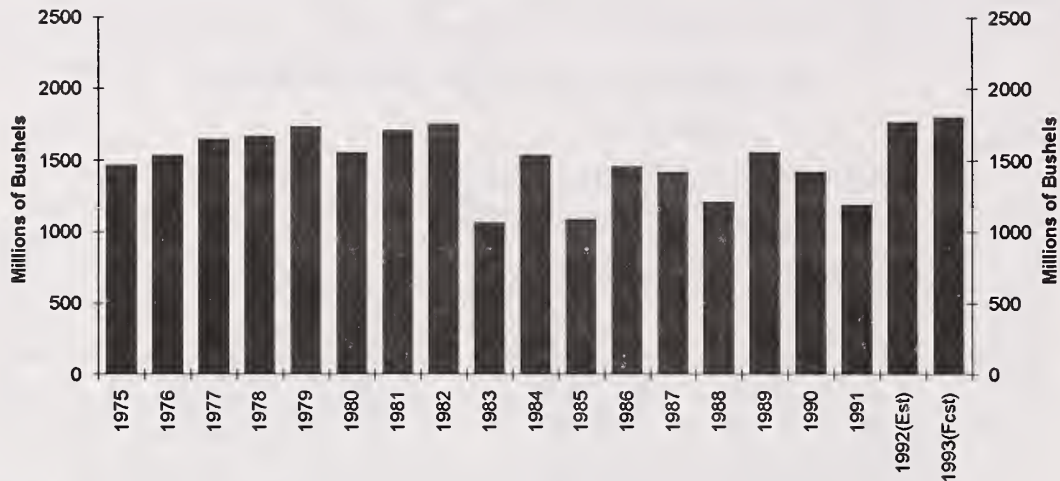
Because of the increased availability, net corn exports from the western corn belt have been greater than those from the eastern corn belt. 1992 was an exception because of the poor crops in Minnesota and Wisconsin. 1993 will be an exception because of the poor crops in all of the western corn belt states.



libstexpwcnexp

Net Exports Of Corn From The Eastern Corn Belt

Illinois, Indiana, Kentucky, Michigan & Ohio

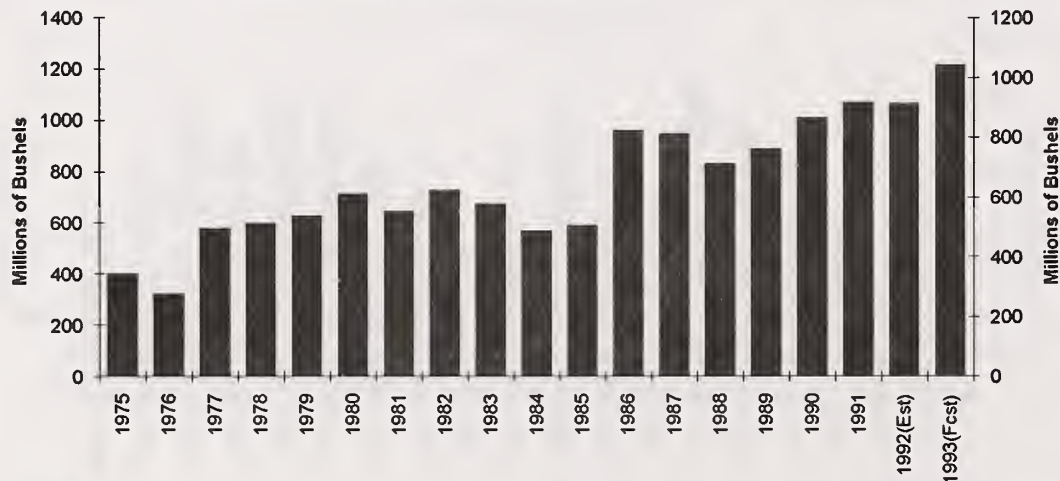


libstexp|cncexpA

The market for corn from the eastern corn belt has also changed. In the late 1970's and early 1980's, the corn went out of the US through Atlantic and Great Lakes export elevators. Now, because of the growth of the broiler industry in all of the southeastern states and the hog industry in North Carolina, most of the eastern corn belt corn is exported to the US southeastern states.

Net Imports Of Corn Into The Southeast

Alabama, Arkansas, Florida, Georgia, Mississippi, North Carolina, South Carolina & Tennessee



libstexp|secnimp

Conclusion

Since 1980, the US corn market has been under pressure as US corn exports have declined by 30%. During the same time, world trade in feed grains has declined by only 5%. During the same time, the US wheat market was also suffering from similar problems and, in an attempt to raise prices, Government programs to subsidize the export of wheat have been pursued aggressively. No such programs have been offered to subsidize corn exports. In fact, the programs that have been implemented to raise corn prices have actually hurt corn exports by limiting corn acreage and subsidizing corn processing.

Virtually all of the pure grain export merchandisers have either gone out of business or have sold their facilities in the US. The companies who have prospered are those who are in corn processing and/or have figured out how to configure their operations to merchandise corn to the processors or areas of growing feed demand such as the broiler industry in the Southeast.

Probably the only real solution to the problems facing the US corn market is the negotiation of trade agreements which reduce import barriers to US corn and reduce production and export subsidies by US competitors. The US Government, to its credit, has been doing that. However, as interim solutions, we have also been guilty of pursuing policies that have helped our competitors and have shrunk our export market. The future of the export merchandising business will depend on whether we truly succeed in negotiating effective trade agreements.

Outlook '94

For Release: Wednesday, December 1, 1993

**"FINANCIAL PERFORMANCE TRENDS AND ECONOMIC OUTLOOK FOR THE U.S.
GREENHOUSE, TURFGRASS, AND NURSERY INDUSTRIES"**

Doyle C. Johnson
Agricultural Economist, Commodity Economics Division
Economic Research Service, USDA

The slow economy is dampening prospects, but grower receipts and expenditures for green industry products are still soaring

The U.S. Green Industry (crop production, wholesaling, retailing, landscaping, and related activities) has slowed since 1990, but is still expanding faster than the rate of real growth in the general economy (measured by the gross domestic product). Grower cash receipts for "green" industry crops (floriculture and environmental horticulture) are outpacing all other major segments of U.S. agriculture. Producer receipts increased from \$6.0 billion in 1986 to \$9.0 billion in 1992, an increase of \$500 million per year or 7.1 percent annually.^{1 2} The wholesale and retail markets have grown even faster than grower receipts due to higher marketing costs and increased imports. Strong consumer and commercial demand for "green" products have also resulted in higher economic levels in the landscaping, interior plantscaping, and related service sectors.

In 1991, grower receipts for floral, nursery, and related products totaled \$8.8 billion, accounting for 11 percent of all farm crop cash receipts and ranking the green industry's crops as number six of all commodity groups in total cash receipts behind beef cattle, dairy products, corn, hogs, and soybeans. Grower receipts for floriculture and environmental horticulture crops are greater than the combined cash receipts for tobacco, plus sugar crops, peanuts, grain sorghum, and food

¹ Includes grower sales of **floriculture** crops (greenhouse and field grown) including cut flowers/greens, potted plants, and bedding/garden plants; and **environmental horticulture** crops including sod (turfgrass), and nursery plants and related products (such as trees, shrubs, ground covers, bulbs, fruit/nut plants, and seedlings and other young plants); excludes cut Christmas trees, seed crops, and greenhouse vegetables. Floricultural crops (including plugs and other greenhouse plants) account for about 45-50 percent of grower receipts while the environmental horticulture crops (including perennial plants, lining-out stock, and turfgrass) account for about 50-55 percent of total grower receipts for green industry crops.

² Data users should note that all receipt and expenditure estimates are preliminary and subject to revision once new data become available, including the 1992 censuses of agriculture, wholesale trade, and retail trade to be published next year by Census Bureau.

grains. Grower receipts for the "green industry" crops are forecast to increase about 5-6 percent this year to \$9.7 billion and to \$10.4 billion in 1994. Grower receipts are expected to continue growing at a moderate rate through the 1990's. Long-run projections using conservative growth rates of 4-6 percent indicate that green industry producer receipts will reach \$13-14 billion by the end of the decade. The green industry crops are expected to be ranked the fifth highest commodity group in grower cash receipts by 1995 and the third or fourth highest by the year 2000.

G/N grower receipts are becoming increasingly important to U.S. agriculture

Commercial production of greenhouse/nursery (G/N) crops occurs in all 50 States and it ranks in the top 4 commodity groups in 20 States. In 5 States, G/N crops rank number one in marketing receipts, and they rank as the second most important commodity group in the major agricultural states of California, Florida, New York, Maryland, and Oregon. They now rank number three or four in the following states which are important contributors to U.S. agriculture: Texas, Alabama, Hawaii, Michigan, Ohio, Pennsylvania, and Oklahoma.

Retail expenditures for green industry products continue to rise

Demand for flowers and plants is expected to surge as the economy continues to improve. The 1994 green industry outlook for retail expenditures and producer receipts is for a gradual expansion at a more moderate rate than the rapid expansion of the 1980's. Total retail expenditures for floriculture and environmental horticulture products by consumers, businesses, landscape contractors, municipalities, and others continue to rise at nearly twice the rate of real growth in the economy (U.S. gross domestic product measured in constant 1987 dollars).

The U.S. gross domestic product (GDP) increased 2.6 percent in 1992 while expenditures for G/N sector products registered a 3.5 percent gain. In 1993, the GDP is expected to rise by 2.7 percent and the G/N sector should experience a 5 percent increase. For 1994, the GDP is forecast to grow 3.0 percent and retail G/N product sales are projected to increase 7.5 percent above this year to more than \$40 billion (\$155 per capita).

Total value of expenditures for floricultural products in 1993 are estimated at \$13.5 billion while expenditures for environmental horticulture products are projected to hit \$24.1 billion. Next year, floriculture expenditures are forecast at \$14.3 billion and environmental horticulture expenditures are predicted to increase to about \$26.1 billion. The floriculture expenditure forecasts for 1994, by commodity groups, are:

- Cut flowers/cut greens, \$6.7 billion, up 5 %
- Flowering plants, \$2.7 billion, up 5-6%
- Foliage plants, \$1.1 billion, down 5-6%
- Bedding/garden plants, \$3.8 billion, up 11%

Insufficient data preclude making expenditure estimates for individual categories of environmental plant products. However, in aggregate, sales of environmental plants should increase 7-9 percent. The total value of expenditures through all market outlets (retail, commercial, municipal, etc.) in

1994 of about \$26.1 billion for environmental plants will consist of the following categories with their approximate marketshare percentages:

- Shade/flowering (deciduous) trees, 15-17%
- Evergreens (trees, shrubs, hedges), 34-36%
- Sod (turfgrass), 14-16%
- Fruit/nut trees and plants, 6-8%
- Bulbs, corms, rhizomes, tubers 1-3%
- Other environmental plants, 24-26%³

Per capita consumer expenditures for floricultural plants exceeded \$49 per person in 1992 and are projected to increase to about \$52 this year and \$55 in 1994. Consumer expenditures for environmental plants were about \$90 per capita in 1992, \$93 in 1993, and are projected to rise to \$100 per capita in 1994.

Higher grower numbers caused average farm income to fall in 1991, but 1992 income rebounded; 1993 was another year of some severe regional economic and weather-related losses which will limit gains in receipts and income, but 1994 should be moderately higher

Average net farm income for green industry farm enterprises⁴ grew 10 percent annually from 1987 to 1990, and in 1990 at \$53,589 was the highest among all production specialties and four times higher than the all farm average income of \$13,458. However, even though total grower cash receipts went up in 1991, substantial increases in the number of growers identified as "greenhouse/nursery" enterprises combined with the slow economy and substantial crop losses in some areas of the country caused average sales and average incomes for green industry production enterprises to fall. The average farm income for green industry producers in 1991 was \$22,125, but rebounded in 1992 to \$24,418 and is expected to improve further in 1993 and 1994.

The average net farm income estimate of \$24,418 in 1992 for greenhouse/nursery farms compares with the U.S. all farm income of \$9,634. If only "commercial" farms are considered (those farms whose gross farm sales are over \$40,000), then the g/n farm income jumps to \$80,316 compared with the U.S. all farm average of \$31,331.

The number of farms whose principal source of income is from greenhouse/nursery specialties, including Christmas tree farms, has grown dramatically in the past several years. The estimate is nearly 60,000 for those producers who derive more than 50 percent of their gross farm income from sales of greenhouse/nursery crops. Many of the producers identified in the 1991 and 1992 USDA Farm Costs and Returns Surveys were added to the greenhouse/nursery farm estimate because their g/n sales are now greater than their sales from any other agricultural production specialty; i.e., many are not newcomers, but they have increased their g/n crop sales. Most of these producers that have been "newly added" since 1991 are small (less than \$40,000 in gross

³ Includes rose bushes, ground covers, vines, herbaceous plants, aquatics, ornamental grasses, bonzai, cacti, etc.

⁴ Includes only those farms whose principal source of agricultural receipts (50 percent or more) is from the sale of floriculture and environmental horticulture crops.

sales) and, therefore, when these smaller operators are added they do not significantly increase the total industry receipts, but they do substantially decrease the average net farm income.

Weather-related problems again this year in some regions caused production losses and substantially impacted retail sales which lowered grower receipts. In particular, hurricane Iniki in September, 1992 in Hawaii caused losses last year and slowed recovery in 1993, wind and storm losses again this year in Florida, persistent wet conditions and flooding in the Midwest for much of the spring through fall gardening/landscaping seasons, and drought conditions in the Southeast reduced grower revenues and consumer purchases. These weather-related problems added to the slow economy have limited the gains to growers, wholesalers, retailers, and landscapers significantly in some areas this year, but barring any major disasters in 1994, sales and incomes of green industry participants can be expected to make moderate gains.

Other recent analysis by the Economic Research Service indicates that 85 percent of greenhouse/nursery growers are commercial farms (over \$250,000 in sales), where at least 95 percent of their agricultural production is greenhouse/nursery crops, and 83 percent of their production is from 1 or 2 specialized enterprises. Since growers of greenhouse and nursery crops are typically not well diversified, in terms of other types of agricultural enterprises, and their operations are usually localized and concentrated on small acreages, complete crop eligibility for crop insurance which is not currently available to all greenhouse/nursery growers would provide the necessary assistance programs as the need arises.

Sales trends and net incomes vary widely by region, crop types, and size of operation

The Southern region⁵ was number one in grower receipts for greenhouse and nursery crops at \$3.36 billion in 1992, up 3 percent from 1991. Receipts were 14 percent higher for greenhouse crops, but nursery crop receipts were off 1 percent. This one region accounts for more farm cash receipts than the U.S. tobacco grower cash receipts. Nursery crops accounted for \$2.30 billion or 68 percent of the G/N receipts in the Southern region. The West was the second most important region last year with \$2.79 billion in grower cash receipts, down nearly 2 percent. This is the first decline in the Western region due to the significant reduction in California's sales, but several other western states were also lower which resulted from recessionary impacts and a continued decline in floral receipts due to higher imports. Both nursery and greenhouse receipts in the West were down about 2 percent from 1991. The Northeast region receipts were up 3 percent totaling \$1.28 billion. Greenhouse receipts were up sharply, but nursery crop receipts were off slightly. The North Central region grower receipts registered the highest gain, increasing 5 percent to \$1.56 billion. Greenhouse crop receipts jumped 9 percent and nursery crops were 3 percent higher.

Grower receipts in 1992 were very mixed by product category

Floricultural product (mostly greenhouse crops) grower receipts fared better during the recession of 1990-92 than did nursery or turfgrass grower receipts. This trend carried over into 1993. Grower receipts for nursery and turf are expected to make a stronger comeback in 1994 as business and residential construction picks up momentum. Grower receipts for cut flowers and foliage plants have trended downward over the past three years due to competitive factors while grower receipts for bedding/garden plants, potted flowering plants, cut greens, and unfinished greenhouse plants

⁵ See map attachment for States included in each region.

and related products have continued to trend upward. These trends are expected to continue next year with slight declines in domestic production of cut flowers and potted foliage plants.

Imports continue to take a larger share of the U.S. cut flower/cut green market

Following the slump in 1991 and a very modest gain in 1992, retail floral expenditures made a moderate comeback this year and next year the market should experience a stronger showing of consumer and business spending. Per capita consumer expenditures reached an estimated \$23.90 in 1992, are estimated at \$24.75 for 1993, and are expected to rise nearly \$1.00 more per capita in 1994. Although the retail market in dollar terms has languished over the past several years (with the exception of this year's comeback), retailers have actually sold more on a quantity basis, i.e., consumers have purchased more at lower prices.

Domestic grower cash receipts for cut flowers may have peaked in 1990 and have continued on a downward track, but domestic grower cash receipts for cut cultivated greens continue to trend up. Meanwhile, floral imports are continuing to increase their marketshares. Current year imports are projected to hit 4.1 billion stems, 10 percent higher than 1992 and accounting for nearly two-thirds of the total market. In quantity terms (stems per capita), the market has continued to increase at a faster rate than dollar expenditures, from about 22.8 stems per capita in 1991 to about 23.8 stems in 1992 and 24.9 stems in 1993.

Potted flowering plant market and grower receipts continue strong

Grower cash receipts for potted flowering plants exceeded \$1 billion in 1992, 9 percent higher than 1991, and are projected to increase another 10 percent this year, and next year receipts should reach \$1.2 billion. Per capita consumer expenditures next year at \$10.50 are estimated to be twice the per capita expenditures in 1986. Expenditures have slowed in the 1990's, but are expected to continue rising.

Potted foliage plant market and grower receipts continue to slip lower

Grower cash receipts for potted foliage plants peaked in the mid-80s and again in 1990 at about \$600 million, but have continued to slip lower each year even though export sales have made moderate gains. Small reductions in cash receipts (3-6%) for foliage growers are expected this year and into 1994. Per capita consumer expenditures for foliage plants reached \$5.75 in 1986, but have fallen to \$4.75 per capita in 1992 and are expected to decline further to \$4.25 in 1994. This trend is expected to continue as consumers will likely spend relatively more on cut flowers, flowering plants, bedding plants, and other horticultural products.

Bedding/garden plants continue to be the hottest sellers

Grower cash receipts for bedding and garden plants continue to rise faster than any other category of floricultural and environmental horticulture crops. Grower receipts exceeded the \$1.3 billion mark in 1992 and are projected to hit \$1.5 billion in 1993 and nearly \$1.7 in 1994. Per capita expenditures (including the value of plants purchased by consumers, businesses, landscapers, and institutions) for bedding and garden plants are estimated at nearly \$12 in 1992 compared with less than \$6 in 1986. The 1993 per capita expenditures will be about \$13 and the 1994 consumption level will exceed \$14 per capita.

Competitive factors are lowering prices and limiting receipts for environmental plant producers

Nursery product and turfgrass producer sales have been significantly impacted by the sluggish economy and lack of residential and business construction. Wholesale nursery and turf growers in California have been especially hard hit due to the State's economic recession. This has also substantially impacted grower sales in other western states including Arizona, Oregon, and Hawaii. Grower cash receipts for environmental crops (nursery stock, landscaping plants, turfgrass, and bulbs) reached \$5.6 billion in 1992, a modest increase of 2 percent over 1991. In 1993, grower receipts for environmental plants should increase about 4 percent to \$5.8 billion and then are projected to increase about 8 percent in 1994 to \$6.3 billion. Even though the U.S. economy is showing signs of improvement there is a "lag-effect" for nursery product sales of at least 6-12 months before the nursery industry is significantly impacted by a pickup in business and residential construction activity.

Sales of sod and field grown nursery stock (B&B and bare root) were affected the most in 1992 by the slow retail demand and sluggish construction activity while container grown landscaping plants fared better than most other types of nursery stock because consumers and landscapers were buying more of these products for replacements and to "spruce-up" their outdoor landscapes. However, the entire nursery and environmental plant sector has been affected by the slower consumer demand which has led to a build-up in supplies, reduced unit sales, and heightened unit price competition which are limiting total receipts for all sellers in the marketing chain. Nursery plant and turf growers, wholesalers, landscapers, and retail garden center operators saw a modest improvement in total units sold and prices for 1993, but this was dampened by the economic problems in the West, flooding and incessant rains in the Midwest, and drought in the Southeast. However, in 1994 a turnaround is expected, but it will likely be uneven across regions and will vary considerably depending on local economic conditions.

Future success of the U.S. green industry will depend on unity in purpose, information access, and research funding; economic analysis can immensely boost the green industry's position and provide a basis for program and policy changes

The nursery, floral, and turf agricultural sector is being challenged by more costly and competitive production and marketing and the general lack of economic knowledge about itself. These difficulties can be mitigated by an in-depth economic research program focused on the green industry's information needs. This effort would greatly benefit the activities of trade associations and other industry participants, but more importantly it would improve the floral, nursery, and turf sector's performance through an enhanced knowledge of supply, demand, price, and related economic variables impacting the green industry. Currently, the green industry has no economic research program such as those available to other agricultural sectors. Some of the major economic and policy issues challenging the green industry include:

- Environmental regulation impacts;
- Labor legislation and other labor related impacts;
- Promotion and research (market orders, MPP funds for exports);
- Trade policy (GATT, NAFTA, Q-37);
- Other industry/government programs such as crop insurance.

These and other economic/policy issues can best be addressed by more complete and accurate statistical and economic data for the green industry such as the following:

- Production and marketing channel (buyer types) data bases;
- Product sales by segment and region;
- Trade data (imports and exports) detailed by product;
- Regional market supply and demand (U.S., Canada, and overseas);
- Costs and returns by enterprise type;
- Industry contributions and economic impact of sales, employment, and taxes;
- Seasonal variations in sales volumes and product prices;
- Industry structural changes (numbers and concentration);
- Financial performance, efficiencies, and characteristics.

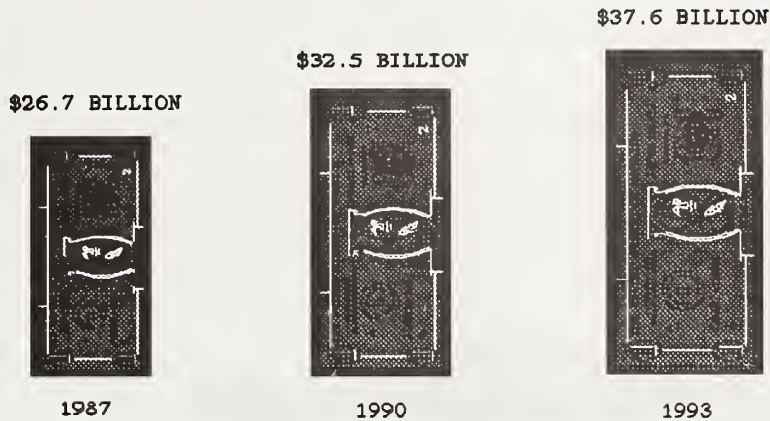
Economic data and analysis covering all aspects from growing to landscaping can help the U.S. green industry to expand and prosper in the years to come. The future of the industry will hinge on its ability to be identified as a major segment of agriculture, environmentally friendly, and essential to our general well-being. The green industry must come together as one voice, promote itself, and capture its equitable share of the federally funded research dollars which now is a mere .019 percent!

Data users should note that income and cash receipts for green industry crops are usually conservative, incomplete, and not necessarily comparable with agriculture in general

Data users should be aware that comparisons of cash receipt estimates for floriculture and environmental horticulture crops are generally conservative from year to year. Since preliminary data for the current year are usually low because of incomplete data, revisions in the following year often necessitate significantly higher estimates, but these revisions more accurately reflect the actual year-to-year changes in the green industry. In addition, cash receipts for floriculture and environmental horticulture crops are not comparable to cash receipts for other agricultural commodities for several reasons. Cash receipts for many agricultural commodities include the "value of home consumption" whereas floriculture and environmental horticulture receipt estimates include only commercial production. Current USDA surveys do not cover all States and categories of greenhouse, nursery, turfgrass, and related green industry crop production. Some categories that are generally considered a part of the green industry are simply excluded or are not specifically surveyed such as cut Christmas trees and horticultural seeds. Other categories such as dried flowers, plugs, and other unfinished plant materials are covered under broad classifications and are not surveyed specifically to obtain accurate information.

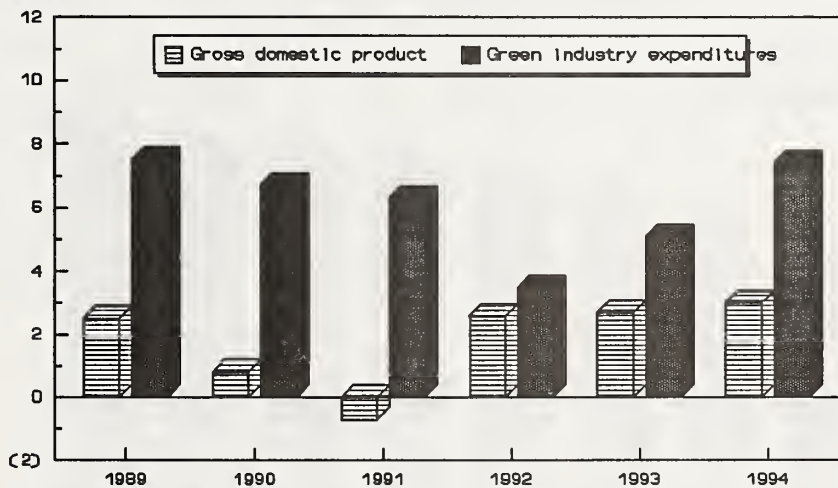
Income estimates for greenhouse/nursery farms are also not comparable with most other types of farm enterprises because horticultural farms generally receive little or no direct government payments while other farm types such as cotton, cash grain, dairy, and livestock enterprises receive significant federal program payments. Green industry crops receive the least of any agricultural commodity group in direct government payments, only .02 percent of all payments in 1990 and only .12 percent of all Federal agricultural research dollars.

GROWTH IN U.S. GREEN PRODUCT EXPENDITURES



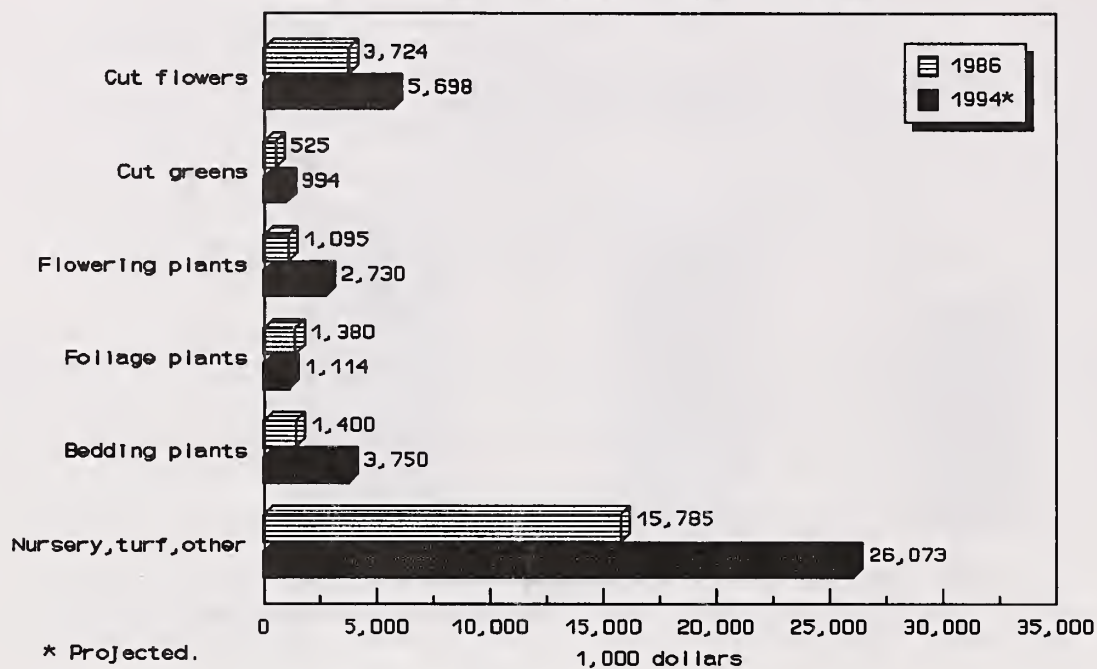
Sales of flowers, plants and related green materials through retail, commercial, and other outlets soared 22% from 1987-90, then 16% more from 1990-93!

Annual Changes In Gross Domestic Product vs.
Annual Changes in Green Industry Expenditures 1/
Annual % change



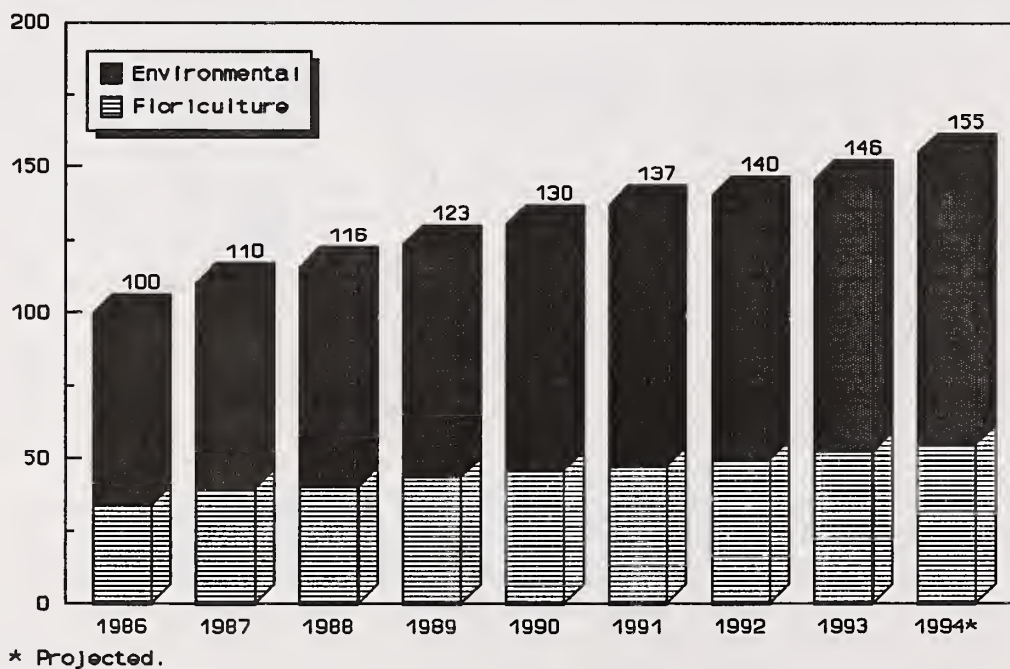
1/ GDP growth rates in constant 1987 dollars.

Trends In Green Product Expenditures



Green Products: Per Capita Expenditures

Dollars



EXPENDITURES FOR GREEN INDUSTRY PRODUCTS 1/
\$37.6 billion in 1993

FLORICULTURE (\$13.5 billion)	ENVIRONMENTAL HORTICULTURE (\$24.1 billion)
CUT FLOWERS/GREENS--\$6.4 billion	SHADE/FLOWERING TREES-- 15-17%
FLOWERING PLANTS--\$2.6 billion	EVERGREENS-- 34-36%
FOLIAGE PLANTS--\$1.1 billion	TURFGRASS-- 14-16%
BEDDING PLANTS--\$3.4 billion	FRUIT/NUT PLANTS-- 6-8%
	BULBS-- 1-3%
	OTHER ENVIRONMENTALS-- 24-26%
	(Deciduous shrubs, vines, aquatics, roses, ground covers, herbaceous plants, bonzai, cacti, ornamental grasses, etc.)

EXPENDITURES FOR GREEN INDUSTRY PRODUCTS 1/
\$40.4 billion in 1994

FLORICULTURE (\$14.3 billion)	ENVIRONMENTAL HORTICULTURE (\$26.1 billion)
CUT FLOWERS/GREENS--\$6.7 billion	SHADE/FLOWERING TREES-- 15-17%
FLOWERING PLANTS--\$2.7 billion	EVERGREENS-- 34-36%
FOLIAGE PLANTS--\$1.1 billion	TURFGRASS-- 14-16%
BEDDING PLANTS--\$3.8 billion	FRUIT/NUT PLANTS-- 6-8%
	BULBS-- 1-3%
	OTHER ENVIRONMENTALS-- 24-26%
	(Deciduous shrubs, vines, aquatics, roses, ground covers, herbaceous plants, bonzai, cacti, ornamental grasses, etc.)

1/ Sales through all outlets (commercial, retail, municipal) of flowers, plants, and other closely related green materials valued on an "as sold" basis; excludes hard goods, landscape installation, maintenance, other services.

Greenhouse/Nursery Grower Receipts, \$9 billion in 1992

NORTHCENTRAL: \$1.56, +5.1%

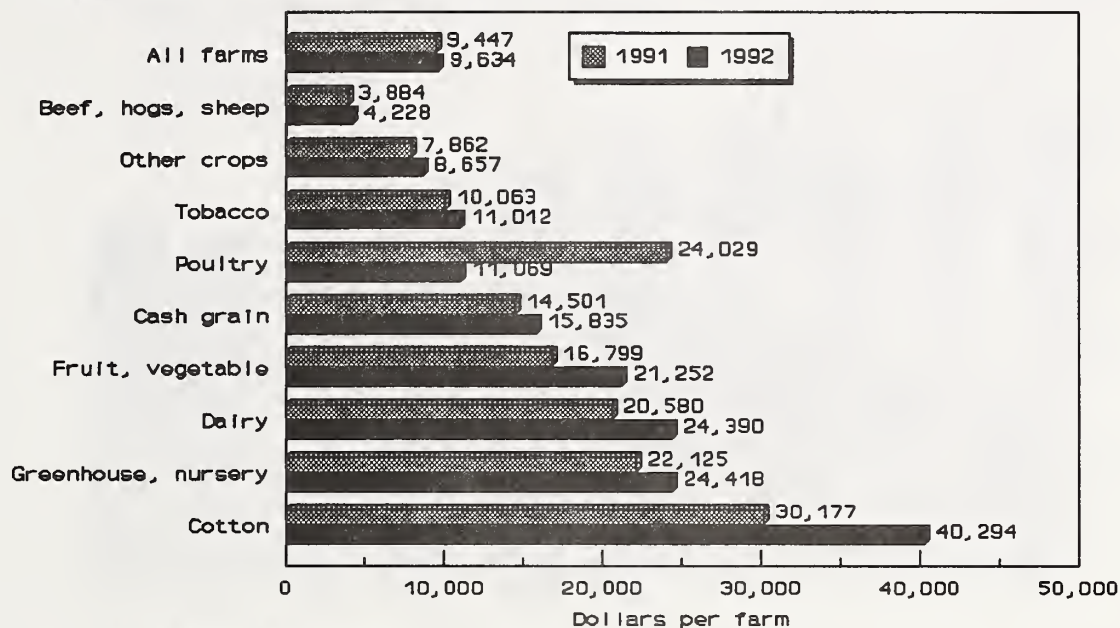
Greenhouse: \$0.59, +9.3%

Nursery: \$0.97, +2.8%

SOUTH: \$3.36, +3.3%

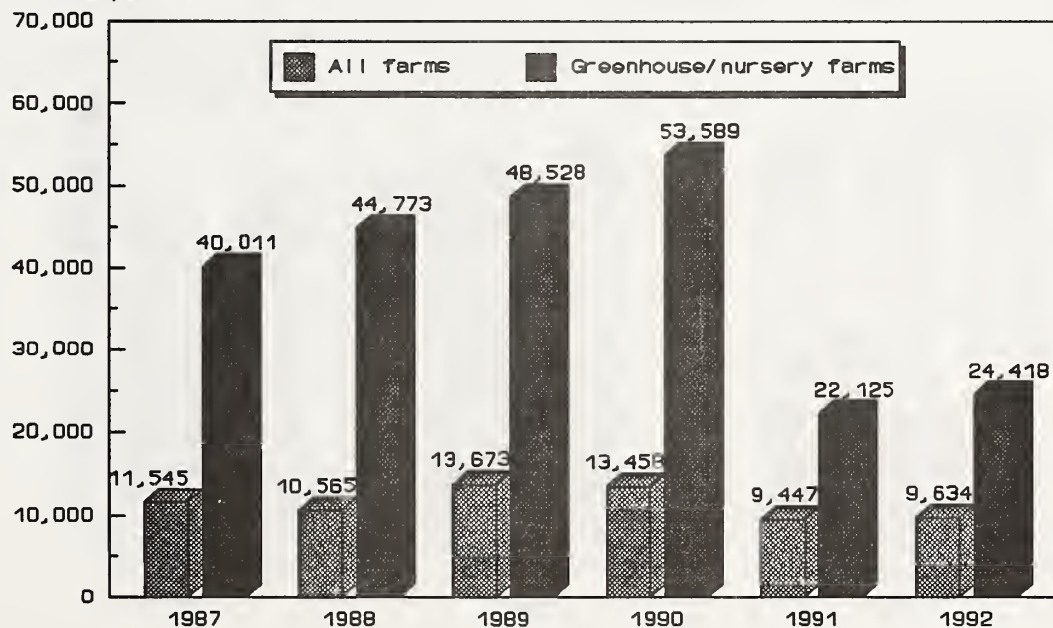
222

Greenhouse/Nursery Grower Net Farm Income Compared with Other Production Specialties 1/



1/ Includes direct government payments.

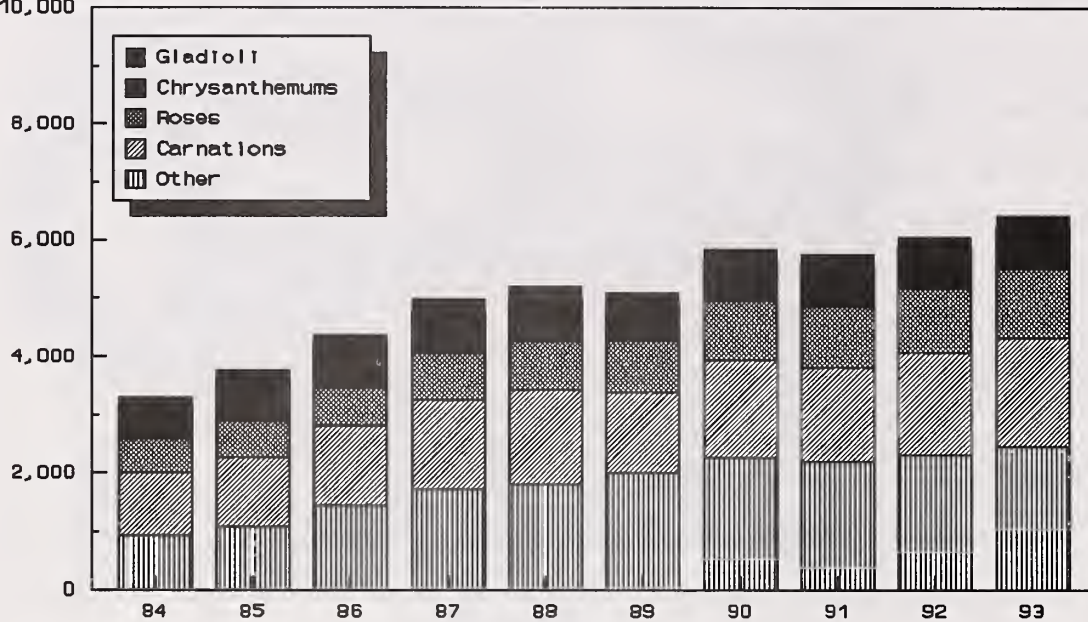
Greenhouse/Nursery Grower Net Income Rebounding Dollars per farm



Cut Flowers: Total Consumption

1,000 stems

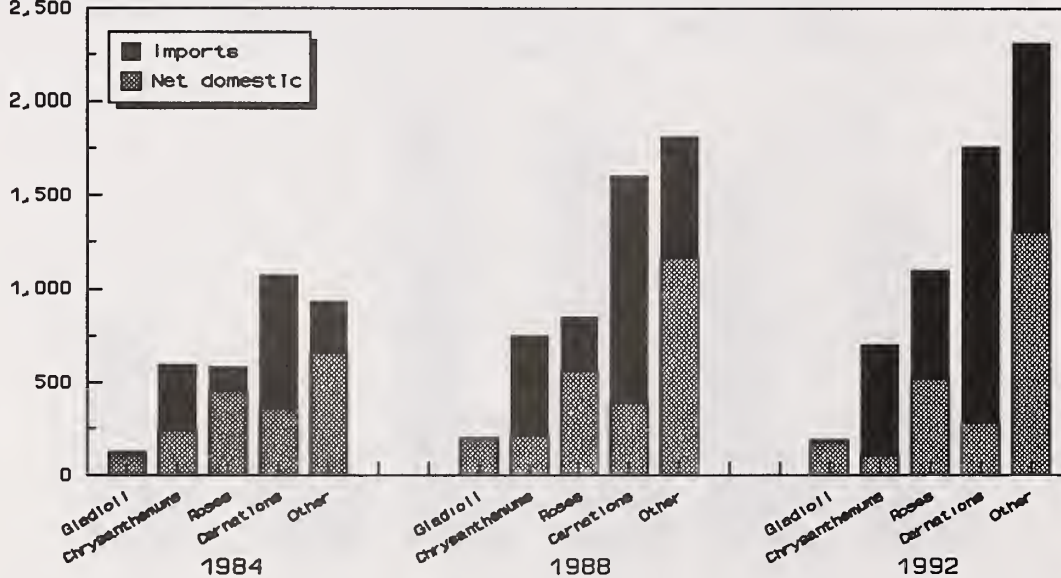
10,000



Cut Flowers: Marketshare Trends, Imports vs. Domestic Supply

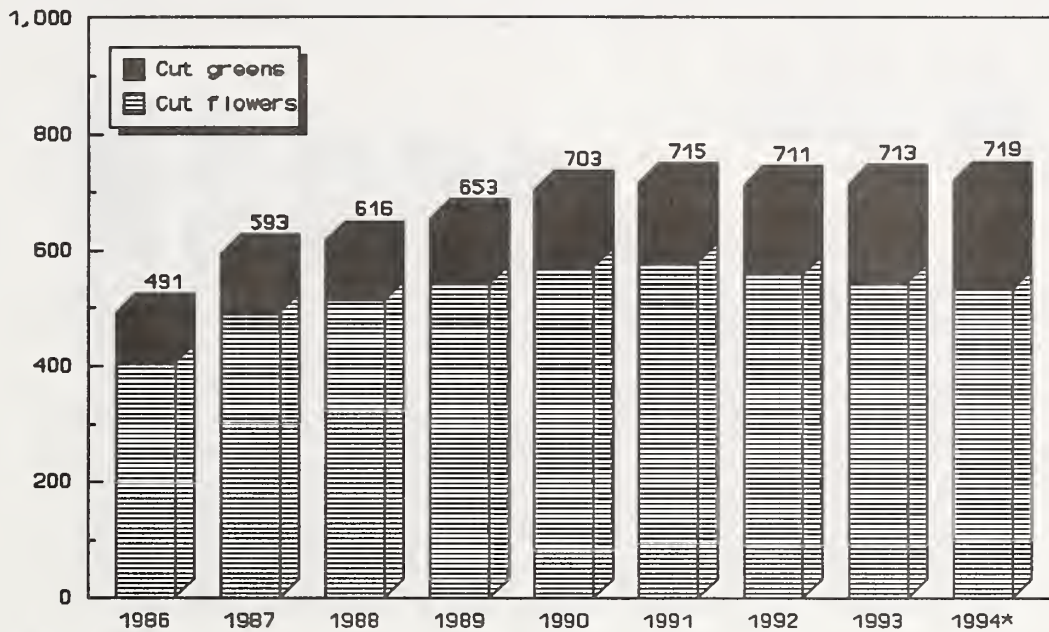
1,000 stems

2,500



Cut Flowers/Greens: Grower Cash Receipts

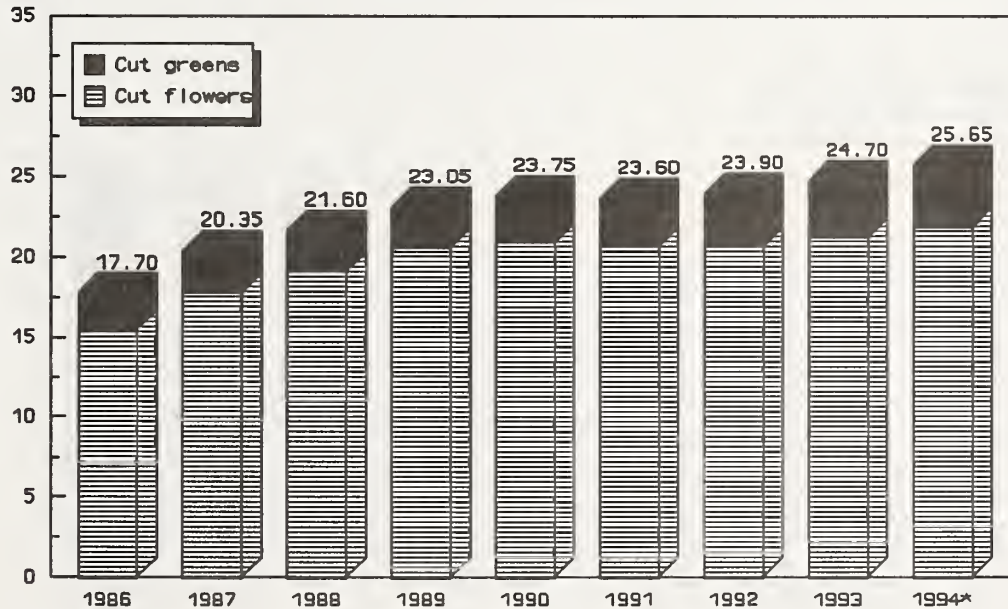
\$ million



* Projected.

Cut Flowers/Greens: Per Capita Expenditures

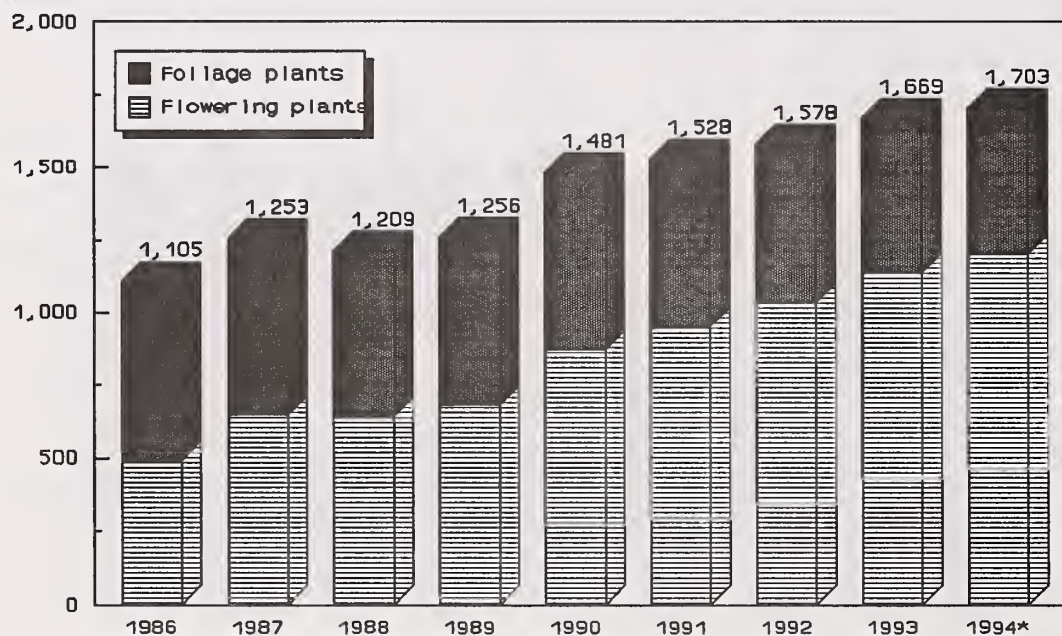
Dollars



* Projected.

Potted Plants: Grower Cash Receipts

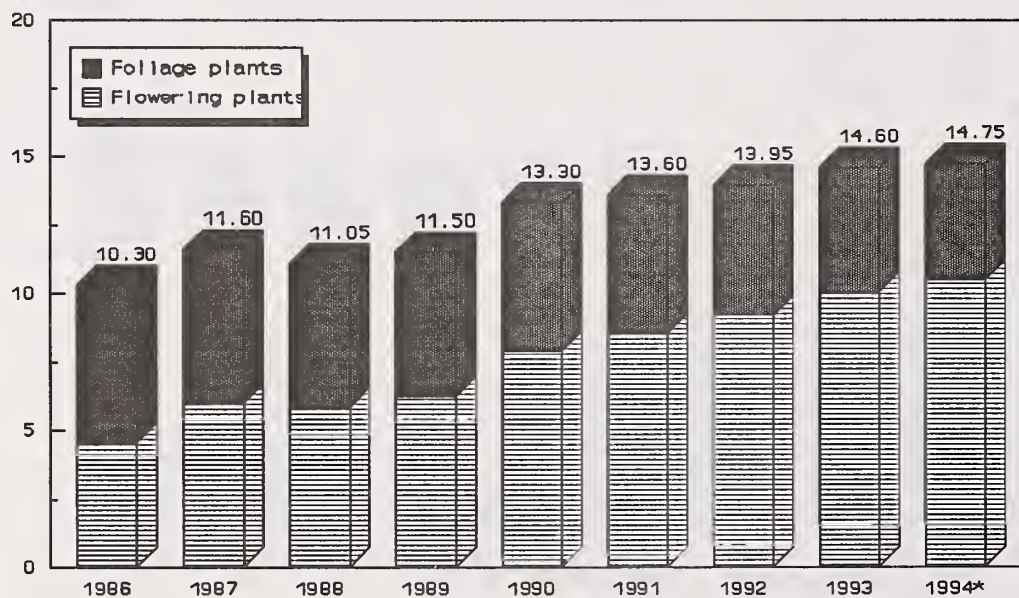
\$ million



* Projected.

Potted Plants: Per Capita Expenditures

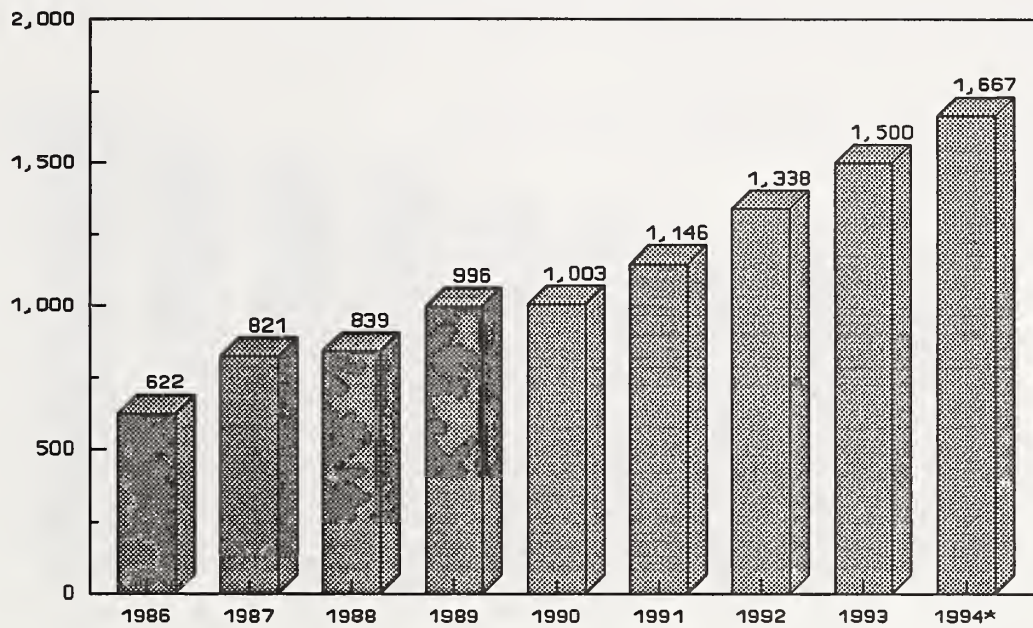
Dollars



* Projected.

Bedding/Garden Plants: Grower Cash Receipts

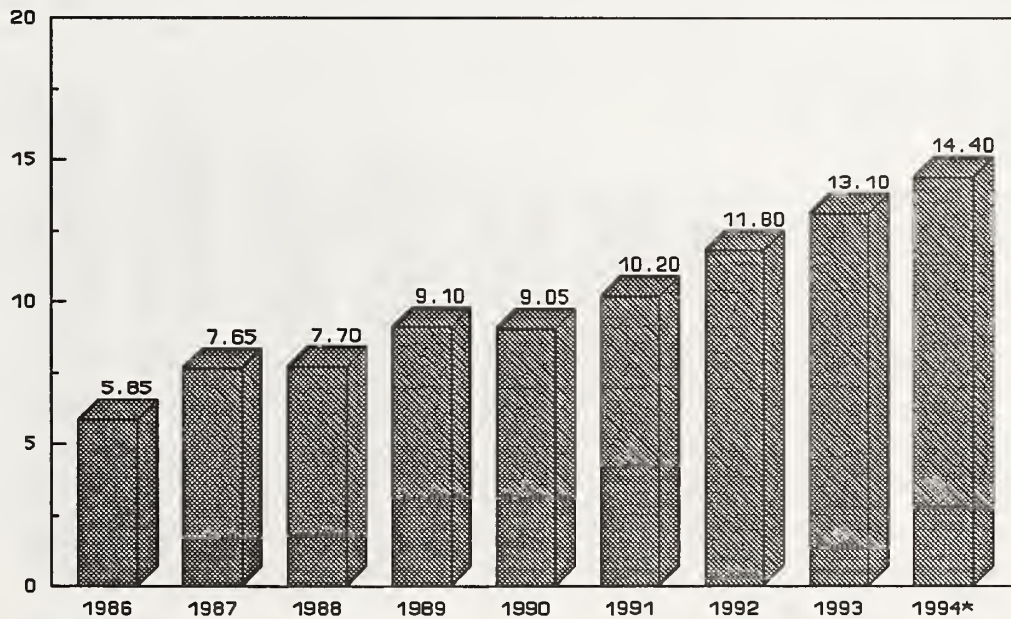
\$ million



* Projected.

Bedding/Garden Plants: Per Capita Expenditures

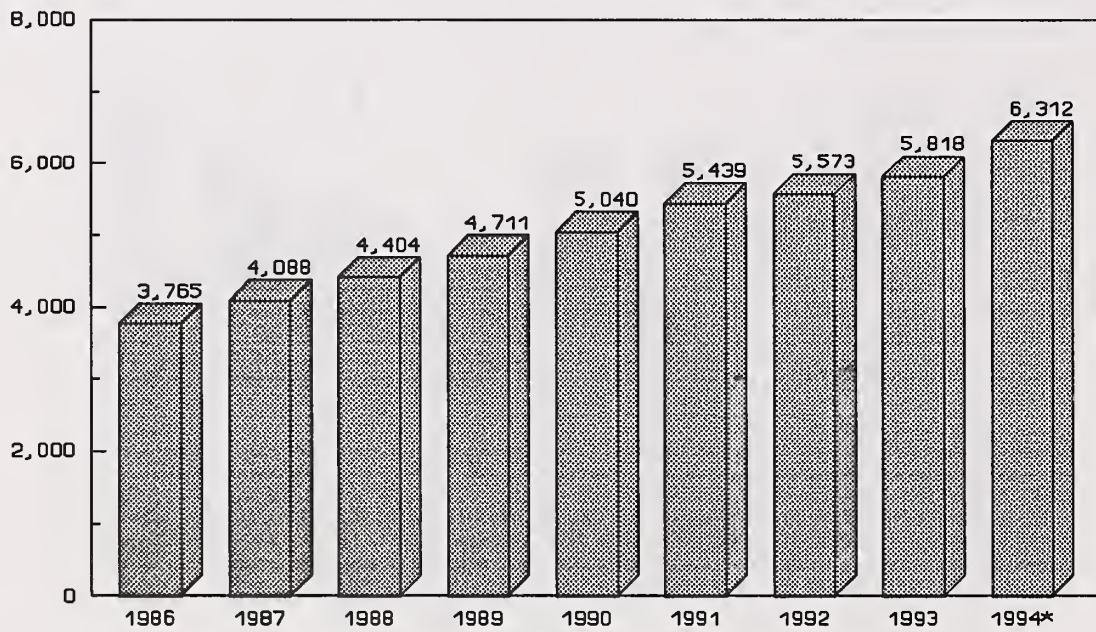
Dollars



* Projected.

Environmental Plants: Grower Cash Receipts 1/

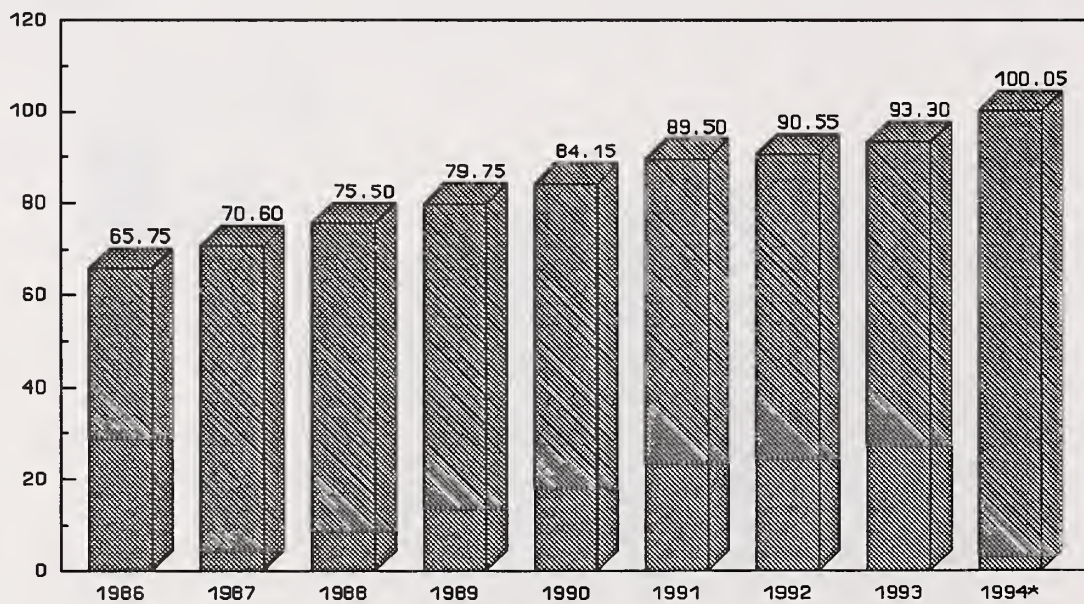
\$ million



* Projected. 1/ Nursery plants, turfgrass, etc.

Environmental Plants: Per Capita Expenditures 1/

Dollars



* Projected. 1/ Nursery plants, turfgrass, etc.

Outlook '94
Session 11

For Release: Wednesday, December 1, 1993

**NEW CHALLENGES IN WORLD HORTICULTURAL MARKETS
AND PROSPECTS FOR U.S. GREEN INDUSTRY EXPORTS**

Gerardus ("Ger") van der Made,
President, Florida International Trade Service, Inc., Orlando,
FL, an international marketing company for the green industry,
and co-initiator of the "Green Exports USA" concept

I. Introduction

Good morning! I'm grateful for this opportunity to discuss the challenges the U.S. green industry faces in world horticultural markets and its potential in those markets.

The U.S. green industry, consisting of floriculture and ornamental horticulture, has shown dramatic growth during the last two decades.

On the national level it has even outpaced all other agricultural commodities. Proof of its pace and impact is the fact that between 1976 and 1991 the U.S. green industry increased by more than 400 percent.

All these factors indicate that the U.S. green industry has become a major contributor to the development of U.S. agriculture.

However, we see that its national force has not been transferred into a comparative global market share.

II. Export Potential of the U.S. Green Industry

The following two slides show U.S. green exports in the years 1989 through 1992, based on final destination and commodity. It is a duplication of the domestic trend and we see that every year more U.S. green products reach foreign borders.

**Slide 1. Exports of U.S. Nursery and Greenhouse Products by
Destination
(\$1,000's)**

	1989	1990	1991	1992
Worldwide	116,541	200,654	213,517	216,222
Canada	40,723	114,311	109,272	109,541
Latin America	13,242	16,059	20,922	27,921
Western Europe	47,906	55,327	67,504	64,957
Asia	13,284	13,212	13,970	13,079
Other	1,386	1,745	1,849	724

**Top Export Destinations
(\$1,000's)**

Canada	40,723	114,311	109,272	109,541
The Netherlands	19,498	22,500	25,863	23,866
Germany	16,877	19,832	25,087	22,815
Mexico	5,813	7,021	14,357	18,649
Japan	7,894	9,055	9,573	9,276

**Slide 2. Exports of Environmental Horticulture Products
(\$1,000's)**

	1989	1990	1991	1992
Bulbs	5,727	7,181	7,415	8,927
Cuttings	5,152	6,010	9,132	6,791
Fruit/nut trees	8,358	9,468	9,045	8,466
Rhododendrons & azaleas	2,005	5,290	5,257	5,322
Rose plants	4,015	6,588	8,408	9,648
Mushroom spawn	1,161	4,957	7,013	8,735
Trees and shrubs	5,658	14,640	13,326	15,398
Foliage and other live plants*	20,228	55,339	52,921	48,306
Cut flowers	10,773	29,445	33,699	32,504
Cut foliage	42,410	52,771	62,239	65,959
	105,487	191,689	208,455	210,056

Source: "Foreign Agricultural Trade of the United States," 1990, 1991, 1992 supplements, USDA Economic Research Service.

As these slides also indicate, the U.S. green industry reached total exports of more than \$216 million in 1992. This export volume accounted for just 2.5 percent of U.S. ornamental receipts and one half of one percent of total U.S. agricultural exports.

The majority of these exports have happened with a "passive" approach; that is, foreign buyers knocking on the doors of U.S. nurserymen. Imagine the great opportunities which exist for companies which pursue international sales! Since 1980, only Florida tropical plant growers united in the Florida Nurserymen and Growers Association (FNGA) and later the American Horticultural Marketing Council (AHMC) have executed structured international marketing programs.

As part of the international group assisting the Florida plant industry we have been able to break open non-existing markets in Europe, the Pacific Rim and the Middle East, and establish a presence.

However, we felt that more structured international marketing activities, including more active and motivated green producing states, could result in more U.S. green exports.

This belief, coupled with the green expertise we've accumulated over more than 10 years, made us decide to work on the formation of "Green Exports USA."

III. Purposes, Benefits and Organization of "Green Exports USA"

Green Exports USA will become the national marketing organization designed to increase export sales of American ornamental horticulture products.

It will be a non-profit umbrella organization, offering the opportunity for national, regional or product-based trade groups to accomplish the following:

- To strengthen the voice of the U.S. horticulture and ornamental horticulture industry on trade issues such as phytosanitary regulations and import duties, and improve negotiating power for international transportation costs.

- To collect and compile information on foreign market opportunities, share trade and marketing data.

Green Exports USA will have the following eight basic objectives:

1. Educate and inform state departments of agriculture and national, regional and commodity-based

horticultural organizations about international trade issues related to the U.S. green industry.

2. Develop a strategic short and medium term marketing plan to promote the ornamental products of its members in selected export markets.

3. Coordinate present export initiatives to improve their effectiveness and economize marketing investments. Obtain grants and other support for international marketing programs.

4. Utilize the central contact point for foreign inquiries, enabling foreign buyers to easily contact potential U.S. supplier/exporters.

5. Create a national forum to exchange information on export opportunities, trade policies, and international issues affecting the U.S. ornamental horticulture industry.

6. Raise the level of international awareness and export motivation among the U.S. green industry.

7. Develop a national export policy for the U.S. green industry and strengthen the voice of the industry on trade issues such as international transportation costs, unfair trade barriers, phytosanitary regulations, import duties, and environmental issues.

8. Target other goals and objectives which will have a positive effect on the development of horticultural exports from the United States.

The formation of Green Exports USA will probably take between one and two years and membership of the umbrella organization will be comprised of:

1. State departments of agriculture
2. National, regional and state horticultural trade organizations.
3. Commodity-based producer associations and cooperatives
4. Educational institutions and research organizations

Individual private companies are not excluded from membership, but are encouraged to -- whenever possible -- join through one of the organization types just mentioned, to create "cluster" forming.

Green Exports USA shall be governed by an Executive Committee, comprised of representatives from each member-organization. The

strategic marketing preparations will be provided by Florida International Trade Service, Inc., headquartered in Orlando, Florida.

Annual dues probably will be assessed to each member organization based on the export volume and marketing programs of the industry it represents.

The five major benefits of Green Exports USA are:

1. Increase effectiveness through combined and targeted efforts.
2. Combined activities will improve impact, reduce costs and increase promotional and marketing opportunities for smaller groups unable to become active independently.
3. Thorough national planning will avoid duplication of marketing efforts and avoid waste.
4. The implementation of a U.S. international marketing plan for the green industry will invite involvement and participation.
5. Unity of the U.S. green industry's export interests will project a strong and positive message internationally.

IV. The Green Industry's Need for More Recognition and Support on the Home Front

This plan for Green Exports USA has been received by many states, trade associations and commodity groups with applause and great interest.

The U.S. green industry was the sixth most important agricultural commodity group in 1991, based on grower cash receipts, behind cattle and calves, dairy products, corn, hogs and soy beans.

Based on the export potential and relative low direct government support (the green industry received only 0.12 percent of all direct government farm payments in 1990), we feel that Green Exports USA needs backing by the U.S. Department of Agriculture through the Foreign Agriculture Service (or International Trade Agency or whatever final agency name will be chosen) and through Federal State Marketing Improvement Program (FSMIP), just to name a few.

Fundamentally, the industry needs to cluster with state departments of agriculture, grower and commodity groups.

Many states have shown their commitment by signing up and committing to the Green Exports USA concept.

Time must be given to developing this national export marketing plan for the U.S. green industry.

With a very limited structured export effort, the U.S. green industry has made a remarkable impact on global markets while other U.S. agricultural commodities are losing ground. The industry has exceptional export qualities and desired commodities and its potential in the global marketplace has been recognized in many parts of the world.

However. . . domestically the U.S. green industry has been underrated and maybe this lack of recognition has extinguished the industry's fire for reaching out and making a substantial global impact.

Keeping in mind that floriculture and environmental horticulture is the fastest growing segment in U.S. agriculture -- and the sixth ranked agricultural commodity -- we need to ask the question: "Is the U.S. green industry getting adequate recognition, fair attention and equal treatment on the home front?"

To my regret, I must indicate that my song is in a "minor" key. I cannot do better than to quote a recent editorial by Julie S. Higginbotham, editor of American Nurseryman. I quote:

" . . . public officials haven't developed even a rudimentary grasp of what the (green) industry is all about."

"Too many officials fail to realize that a nursery is not simply a corn or soybean farm with different crops. The level of understanding is low, even though nursery and greenhouse crops are the sixth-ranking agricultural commodity in the U.S. (ahead of items like wheat, cotton and tobacco).

When we move the U.S. green industry to the global marketplace, "What can we expect under these conditions? Think about the earlier mentioned low 0.12 percent federal assistance for the green industry. It's also disturbing to find out that only 75 minutes during this Agriculture Outlook '94 Conference is reserved for the green industry -- just 75 minutes, or five percent, of more than 1,500 minutes of speeches.

Another setback for the U.S. green industry is the constant threat of diminishing services by the Economic Research Service (E.R.S.) of the U.S.D.A., one of the major suppliers of data, statistics and analysis to our industry. Reducing funding allocations to E.R.S. weakens the strategic capabilities of the U.S. green industry internationally.

The export process brings another difficulty here at home. I'm referring to the confusing export certification process through state and federal plant inspection offices.

Nurserymen, enthused to have lined up their first foreign buyers, approach their state inspectors with a plant list in hand, and are too often faced with inexperienced inspectors armed with outdated information. The inspectors' discouraging approach can only be overcome by nurserymen so motivated to export that they go the extra mile, dig a little deeper, investigating the true regulations themselves.

If we are going to encourage our nurserymen to tap the global opportunities that exist, we need the support of our state and federal inspection officials. Phytosanitary regulations are confusing . . . this is a fact. But a positive, "can do" attitude from certification officials will make a world of difference. We ask that they look for solutions, help our nurserymen meet the regulations, and support them in our goal to increase exports.

V. Close

Despite these challenges and obstacles, we're optimistic that with a united effort among the U.S. green industry, this "green giant" can effect a considerable improvement of its current global market share.

Current U.S. green exports of close to \$250 million can quadruple in four or five years when a strategic plan and organization is in place. Capitalizing on the U.S. growers' extensive production experience and the absorption potential of the global market, we are convinced that the future of the U.S. green industry is not only within the borders of our nation. Green Exports USA is the password for today and years to come.

Outlook '94

For Release: Wednesday, December 1, 1993

**MAJOR LEGISLATIVE AND REGULATORY ISSUES
IMPACTING THE U.S. FLORICULTURE AND ENVIRONMENTAL
HORTICULTURE INDUSTRY**

Drew N. Gruenburg
Senior Vice President, Society of American Florists

Good morning. It's a pleasure to be here today on behalf of the Society of American Florists, the only national trade association which represents all three segments of the floral industry.

I agreed to talk this morning on a topic that, frankly, brings fear and loathing to the hearts of many business people in the floral industry: government relations. When you ask people in this industry what the biggest impediment to the future of their business is, invariably you hear the words "the federal government." Small business owners in the floral industry, like those in other industries, have a distaste for what they consider to be government intrusion in the way they run their business. You hear complaints like: "The regulators live in a vacuum and don't know how their rules will work in the real world." or "The administration is always trying to put more burdens on the backs of small business." or "Congress? Well Congress is just plain out of touch."

In a lighthearted way, as an association we have even tried to take advantage of these attitudes. Since we represent growers, wholesalers and retailers, we have different membership recruitment brochures which are targeted specifically at each segment. The headline on our brochure aimed at growers reads, "Join the group that helps growers control over 400 pests. . ." And when you open the brochure you'll see the tag line: "perhaps even some you voted for."

But I'm not here today to talk negatively about the federal government. In fact, our industry's most recent interaction with Congress and the federal agencies has been very, very positive, and as an industry, we look forward to strengthening this relationship.

I would like to talk today about three major issues facing the floriculture and environmental horticulture industry and then quickly touch on some other issues which will have an impact on the future of this industry.

First, I think it is important to provide you with some background information about the industry. This is the kind of information we present to members of Congress and other federal officials when we go to Capitol Hill.

Today, more than 50,000 small businesses in every Congressional district in the nation are engaged in providing the American public with flowers and plants for special occasions and for everyday use. Floriculture alone is a \$12 billion component of the U.S. economy and is considered to be one of the fastest growing sectors of U.S. agriculture. Furthermore, USDA figures show that the floriculture and environmental horticulture industry represents 10 percent of all crop agriculture in the United States. This ranks the farm gate value of floriculture and environmental horticulture crops ahead of wheat, ahead of cotton and ahead of tobacco, and behind only corn and soybeans.

Everyone knows that flowers and plants enhance the quality of life as people engage in their daily activities. Flowers and plants are symbols around the world of love, sympathy and joy. They also enhance the quality of our environment. And beyond that, flowers and plants have been proven to have positive psychological and physiological benefits, can reduce stress, and provide therapy to the aging and to mentally impaired citizens.

In addition, the U.S. floral industry has a record of significant accomplishments in the area of research. U.S. and international agriculture is indebted to research first conducted in the floriculture industry. Floriculture was the first to use automatic irrigation and fertilization, now standard for many agricultural commodities. Trickle irrigation, derived from greenhouse watering systems, has revolutionized arid climate agriculture. Floriculture scientists have also developed methods to conserve energy and water, prevent pesticide pollution and reduce air pollution. In addition to enhancing the quality of life, floral products can literally improve the quality of the environment. Studies have proven that foliage plants properly placed in buildings and homes can improve the quality of indoor air by reducing pollutants.

This then is the message that our industry is taking to Congress, the administration and federal agencies. We want to let them know that we are a significant and growing part of agriculture whose products can actually benefit the environment and at the same time enhance the physical and emotional quality of life for the American public.

This educational process has been a major part of two legislative campaigns our association and this industry has been involved in this year. This first is PromoFlor, or the Fresh Cut Flowers and Fresh Cut Greens Promotion and Information Act of 1993. This is legislation to create a promotion order for fresh flowers and fresh greens similar to the promotion orders currently being seen by the American public for eggs, beef, pork, raisins and cotton.

With a leveling off of sales in the floral industry, small business owners in the industry saw an urgent need for more nationwide promotion of its products. As conceived, PromoFlor will assess handlers of cut flowers and cut greens. The order will cover both domestically-grown and imported products. Included under the order will be all fresh cut flowers and fresh cut decorative foliage produced either under cover or in field operations.

Industry-funded activities under the program will consist of promotion to advance the image, desirability or marketability of cut flowers and cut greens, consumer education to provide information on the care and handling and appropriate use of cut flowers and cut greens, and research as needed to support promotion and information activities. No lobbying or other political activities will be funded under the order.

As of November 22, 1993, PromoFlor legislation had passed in both the House and Senate and was awaiting the President's signature.

The floral industry has worked very hard over the past two years to make PromoFlor a reality, and one of the primary benefits of this effort, in addition to the actual legislation, is that the floral and environmental horticulture industry has been able to generate great visibility. At SAF, our lobbyists made many visits to every member of the House and Senate Agriculture Committees to let them know how important PromoFlor was and also to explain the significance and importance of the floral industry to U.S. agriculture. Before lobbying was conducted on PromoFlor, many members of Congress had no idea how large the industry was nor did they know what a growing and expanding part of agriculture it was.

The other primary benefit of this legislative effort is that it underscores the importance of grassroots involvement in the political process. Historically, this industry has not been as politically active as it should. But, throughout the lobbying effort this year, there are countless examples of industry members making phone calls or writing letters which immediately translated into Congressional action. It is obvious that lobbying for PromoFlor has taught industry members a valuable lesson that grassroots involvement in our democratic government can and does make a difference.

Another very positive step forward for the floral and environmental horticulture industry which occurred this year was recognition in the House Agriculture Appropriations bill of the need for additional research funding for floriculture and environmental horticulture.

In 1991, the Society of American Florists established the National Floriculture Research Initiative Task Force. Its objective was to obtain federal funding for floriculture research. I have already said how important floriculture and environmental horticulture is to the U.S. economy and U.S. agriculture. It is also a fact that floriculture has been a model industry for agricultural innovation and technologies for improving efficiency and marketability.

Yet despite these accomplishments the floriculture industry has been overlooked time and time again in the federal budget. We feel, however, that this will change in the near future. This past April, testimony was presented by Dr. Terril Nell, chairman of the environmental horticulture department at the University of Florida, before the House Agriculture Appropriations Subcommittee. There were two objectives in presenting the testimony. First, it was important to present general

information about the floriculture industry in an effort to educate the subcommittee members. And second, specific requests were made to fund two research projects--one on water quality and one on the sweetpotato whitefly.

During the summer SAF lobbied members of the House and Senate Agricultural Appropriations Subcommittees. As a result of the testimony, lobbying and subsequent awareness of the industry by Congress, the following statement was inserted in the Agricultural Appropriations Bill:

"Floriculture and environmental horticulture crops account for approximately 10 percent of all farm crop cash receipts. The committee urges the Department to give increased attention to the research needs of this growing industry."

We feel this statement is the springboard this industry needs to ensure that federal research dollars will come its way in the future.

In addition, we feel the pressure brought to bear on the USDA by this task force was responsible for the USDA's Agricultural Research Service (ARS) to name a national chair to evaluate the research needs of the industry. Dr. Marc Cathey former director of the U.S. National Arboretum, in 1992 conducted a comprehensive evaluation of the research needs. This report is currently being reviewed by ARS to determine how it should be used in current lobbying efforts before the House and Senate Appropriations Committees.

A third issue of critical importance to this industry is the possible relaxation of quarantine regulations. One of the most profound changes in the floral industry during the past 20 years has been the movement away from strictly domestic sources for floral products to a more global marketplace. Today floral products come into the United States from nearly every corner of the globe.

Unfortunately, as more products are exported to the United States, this increases the risk that new and exotic pests and diseases will enter as well.

On September 17, 1993, the USDA's Animal and Plant Health Inspection Service (APHIS) issued a proposed change in the Quarantine 37 regulations which will allow the importation into the United States of five additional genera of plants in growing media. These genera are Anthurium, Alstroemeria, Ananas, Nidularium and Rhododendron. APHIS has indicated it believes these genera can be exported to the United States under specific conditions without introducing or distributing dangerous plant pests or diseases.

This ruling is the first in a long series of rulings APHIS will make in the coming years in response to petitions filed by several foreign nations to relax the Q-37 regulations to allow approximately 60 different genera--about 9,000 different species--to be imported into the United States. APHIS has indicated it will review these requests for relaxation five products at a time.

SAF has been opposed to a relaxation of Q-37 based solely on biological grounds. SAF opposes any change in the Q-37 regulations which will increase the risk of disease or pest infestation in domestic crops. Allowing additional plants in growing media to enter the United States will increase that risk. Root born diseases and pests are among the most difficult to detect. With the federal budgetary constraints that have required the redistribution of APHIS inspectors and personnel and an increased level of imported product requiring inspection, the risk of pest and disease introduction is great. In addition, increasing the number of plants that may be imported in growing media will also increase the likelihood and occurrence of funneling unapproved products through approved facilities further increasing the opportunity for the introduction of pests or diseases.

Finally, with the increased attention being paid to the environmental impact of pesticides and the prohibitive costs of reregistering pesticides, many chemicals currently in use by the floriculture and environmental horticulture industry are in danger of being pulled from the market. Lack of effective ways to combat pests and diseases combined with the prospect of more pests coming into the country when Q-37 is relaxed is a daunting proposition for the domestic floriculture industry.

SAF and other industry groups, most notably the Professional Plant Growers Association and American Association of Nurserymen, are involved in an aggressive effort to demonstrate to APHIS the dangers of allowing Q-37 to be relaxed.

These then are three of the major issues facing the floriculture and environmental horticulture industry today. The list of other legislative or regulatory issues affecting the industry is extremely long--too long in fact to adequately address in this speech. As an overview, however, let's take a quick snapshot view of some other issues:

EPA's Worker Protection Standards - In August of 1992, the EPA issued its final regulations regarding farm worker safety in nursery and greenhouse operations. These standards regulate the time workers must wait before they reenter a greenhouse that has been sprayed for pests and diseases, protective clothing which must be worn by laborers in a floriculture or nursery operation, and the types of warning signs which must be posted among other things. The regulatory process took nearly eight years, and the floral industry was involved every step of the way to ensure that its concerns and desires were addressed.

Currently, the industry is awaiting the outcome of a decision by EPA on whether or not to exempt cut flower and cut fern growers from certain provisions of the regulations. During the negotiation process, this industry was able to show EPA that cut flower growers have specific requirements which affect their ability to grow and harvest a profitable crop.

Minor Use Pesticides - SAF is currently a member of the Minor Crop Farmer Alliance (MCFA) which is a coalition of agricultural organizations that are

committed to seeing some changes made in the pesticide registration process. Legislation has been introduced which would speed up the reregistration process and also provide some incentives for chemical companies to continue reregistering their products.

Federal Preemption of Local Pesticide Use Regulations - Currently there are efforts being made to amend the Federal Insecticide, Fungicide and Rodenticide Act (FIFRA) to preempt local jurisdictions from regulating the sale or use of pesticides.

The floriculture and environmental horticulture industry is concerned about the chilling effect local regulations have on the ability of growers to run their operations efficiently. A hodge podge of local regulations could cause havoc for growers who have multiple location operations.

The Supreme Court has ruled that FIFRA does not preempt local jurisdictions from creating and enforcing their own regulations. However, the high court did note that Congress should address this issue and has the ability to amend FIFRA. The industry is working with the Coalition for Sensible Pesticide Policy in an attempt to amend FIFRA.

Healthcare - SAF is an active member of several coalitions monitoring the healthcare proposals currently being debated on Capitol Hill. Although SAF does not have an official position on any one proposal, SAF agrees that the healthcare crisis cannot be solved by maintaining the status quo.

SAF recently surveyed its members to see what their specific concerns are, and we will be using that information in our lobbying efforts.

In addition, SAF is involved in a host of other issues including: carrier undercharges; Clean Water Act amendments; disaster assistance; estate taxes; family and medical leave; labor reform; methyl bromide; minimum wage; OSHA reform; paperwork reduction; plant variety protection; regulatory flexibility; storage tanks; the USDA reorganization, wetlands and more.

The scope and magnitude of the issues this industry faces seems to increase on a daily basis. At the same time, this industry and the associations and organizations that represent it have increased the volume of their collective voice on Capitol Hill. And the outlook for the future is for an even stronger presence.

As an industry we have an obligation and a responsibility to see that Congress and the federal agencies receive our input and know our concerns. In order to be heard, we must first have a voice. The floriculture and environmental horticulture industry has found that voice, and Washington will be hearing more from us in the future.

Thank you.

Outlook '94

For Release: Wednesday, December 1, 1993

ISSUES AND OUTLOOK FOR FARM BUSINESS FINANCE

Robert G. McElroy and Charles Dodson
Economic Indicators Forecasts, ERS

The Midwest floods and the Southeast and Mid-Atlantic drought have skewed the distribution of '93 incomes for U.S. farmers and ranchers. While producers directly affected by these disasters will likely see lower net cash incomes this year, those outside the disaster areas will benefit from higher crop prices. Despite lower production, especially for corn and soybeans, total U.S. net cash income for 1993 could reach \$59 billion, possibly surpassing the 1992 record.

There are several factors which may explain the apparent inconsistency between lower production and higher expected 1993 cash incomes. A large portion of the cash income received by farmers in 1993 is a result of sales of 1992 crop out of inventories. Farmers who held stocks of corn and soybeans were able to benefit from higher prices this past summer. Unlike droughts, the impact of a flood is not uniform between farms. Farm operations located in the Mississippi or Missouri flood plains may have lost all of their 1993 crop. Meanwhile, farm operations only a few miles away on well-drained upland soils may have had a normal, or only slightly reduced, crop. Additionally, the flood had a much more severe impact in the western Corn Belt as evidenced by Iowa where corn production was down 52 percent and soybean production was down 31 percent from last year. The eastern Corn Belt had much more favorable weather conditions. For example, the Indiana and Ohio soybean crops are forecast up over 1992.

The Southeastern and Mid-Atlantic drought substantially reduced the production of grains, tobacco, and peanuts in these regions. The contribution of these regions to total U.S. agricultural production is not sufficient, however, to have any major impacts on U.S. farm income.

Flood and Drought Raise 1993 Cash Income, Lower Net Farm Income

U.S. corn acreage to be harvested is forecast down 12.5 percent from last year, while soybean acreage is down 3.7 percent. This forecast reduction in harvested acreage will have a major impact on cash grain farms in the affected regions, especially given the pre-harvest costs that farmers had invested in their growing crops. Reduced acres and yields down from 1992's records contribute to lower forecast corn and soybean production for 1993 over 1992. However, production of these crops is still near 1991 levels.

The floods and drought of 1993 had far-reaching impacts. As of late October, 739 Midwest and 497 Southeastern and Mid-Atlantic counties had been declared as flood and drought disaster areas eligible for emergency loans. These 1,236 disaster counties accounted for about 40 percent of all U.S. counties.

- About 37 percent of the Midwest disaster counties are also farming-dependent counties, where at least 20 percent of total earned income comes from farming. About six percent of the Southeast and Mid-Atlantic disaster counties are farming-dependent. Reduced farm income will have a ripple effect on the economy of these local communities.
- The disaster counties contain 41 percent of all U.S. farms, but 52 percent of commercial farms (those with gross sales of at least \$50,000). Of specialized corn farms, 65 percent are located there. The counties also accounted for nearly 40 percent of the total 1991 value of U.S. agricultural production.

Regional Effects Evident

Net farm income, which measures the year's production and adjusts for changes in inventories, should fall in 1993, particularly for hard-hit States in the Midwest and in comparison with last year's record crops. On the other hand, net cash incomes could rise, even for the States most affected by flood.

Focusing only on national estimates will not adequately reflect the regional impacts of the 1993 floods and drought. While crop production in the major corn and soybean producing States is down in 1993 over 1992's records, the impact is much more severe in the western Corn Belt. The value of 1993 major field crops is down an estimated \$2.0 billion in Iowa and \$1.1 billion in Minnesota. As a consequence of the drought, the expected value of production for peanuts, cotton, corn, soybeans, and tobacco in Georgia and the Carolinas is down \$580 million over 1992.

For farmers outside the disaster areas, 1993 may be very productive. The value of the Indiana crop was up \$300 million. In Texas, cotton production is up approximately 60 percent over 1992, and corn production is up 7 percent. As a result, the value of production for Texas' 1993 cotton, corn, rice, peanut, sorghum, and soybean crops is up \$300 million over 1992.

Due to marketing patterns and selling of current inventories, the lost production will impact both 1994 and 1993 cash incomes. Given the November State-level crop production forecasts, current U.S. prices, normal carrying charges, and recent relationships between State-level expenses and U.S. totals, the impacts of the lost production on incomes for a State such as Iowa can be examined.

Based on past history, we can expect that about 41 percent of Iowa's corn crop and about 48 percent of Iowa's soybean crop will be sold this calendar year. Preliminary estimates of Iowa cash receipts through the first half of this year have already been developed. These estimates show feed grain receipts up 10 percent compared with the first six months of 1992 and oilseed receipts up

4 percent. These sales of carryover from last year's crops are helping ease the losses expected for the first four months of the 1993/94 marketing year. Livestock receipts for the same six months are up over five percent.

Valuing the Iowa crops expected to be marketed for the last two quarters at quarterly U.S. prices and adding these to the January through June preliminary estimates indicates total 1993 Iowa crop receipts down only 3 percent from 1992. Stronger U.S. livestock prices are expected to result in Iowa livestock receipts being up 4-6 percent. Government payments could nearly double and with expenses rising only marginally, Iowa net cash income could actually increase by over 20 percent. Here again, the receipts from the first half are offsetting lower receipts in recent months. Who will benefit from this depends on two factors: the amount of carryover from 1992 and how much of the 1993/94 crop was actually damaged? Most of the effects of this year's floods and drought will be felt next year with much smaller carryover to be sold. Net cash income does not recognize the reduction in inventories which are a result of the high prices and short crop. Incorporating inventory adjustments and other noncash items results in an estimate of 1993 Iowa net farm income of \$1.4 billion, down more than 40 percent from 1992.

Some Farm Types Affected More than Others

Besides location, incomes by type of farm will likely show considerable variation this year. Cash grain farms will be directly impacted due to lower production. Hog and dairy operations will be impacted by higher feed costs. The Southeastern and Mid-Atlantic drought affects tobacco farm incomes. The additional crop receipts (primarily 1992/93 corn and soybeans) coming from flood- and drought-induced higher prices will mainly go to cash grain farmers. Red meat and dairy operations with cash grain production will also receive additional cash receipts. Cash grain, red meat, and dairy farms in the disaster counties could also receive the additional disaster payments. Most of these payments, however, will be disbursed in 1994.

Total U.S. Incomes Up

The adverse weather this year has caused tremendous regional variations in cash incomes. Nationally, however, net cash income is forecast up.

- Higher prices brought on by the floods and drought will benefit producers with crops to sell. U.S. crop cash receipts are forecast down only 1-3 percent, as sales of last year's crops offset lower receipts from this year's crop. Livestock receipts are forecast up due to strong cattle, hog, and broiler prices.
- Much of calendar 1993's crop receipts come from sales of 1992/93 crops. Nearly 60 percent of corn and 50 percent of soybeans are marketed in the calendar year following harvest. This means sales of last year's record crops are offsetting a lower level of sales of this year's reduced crops. The reduced level of 1993/94 crop production will have more of an impact on 1994 cash incomes than for this year.

- Government payments are up nearly 20 percent. Most direct Government program payments to feed grain producers are made during the first half of the year. This was before the weather-related impacts on production and prices. Feed grain payments have nearly doubled and \$1 billion in disaster aid (including payments for previous years' disasters) has already been or will soon be disbursed.
- Cash expenses for 1993 are forecast up only 1-2 percent, about the same percentage increase as in gross cash income. This will result in U.S. net cash income of around \$59 billion, 2-4 percent higher than in 1992.
- Net farm income is a better measure of profitability since it adjusts for inventories carried in from previous years. For 1993, net farm income is forecast at \$44 billion, down nearly 10 percent from 1992. The floods and drought are expected to have a significant impact on 1993 inventories of corn and soybeans, which could be reduced by \$3 billion.

1994 Cash Income Should Fall Slightly

The first forecasts for 1994 are indicating steady to slightly increasing gross cash income. If next year's crop yields return to trend levels, crop cash receipts could rise 2-7 percent. Livestock receipts will likely be down, due in large part to lower milk prices. The overall effect will be total gross cash receipts of \$172-\$180 billion, steady to up 5 percent from this year.

With the exception of cotton and tobacco, all crops are indicating higher 1994 receipts. Percentage wise, rice receipts could rise the most. The announced opening of the Japanese market to U.S. and world rice is expected to result in prices nearly doubling over the next several months. On top of steady wheat receipts, total food grain receipts are forecast up 7-9 percent. Feed grain receipts, led by corn, are also forecast up (10-15 percent). Fruits, vegetables, and greenhouse/nursery products will continue strong.

On the livestock side, red meat receipts are expected to be steady to rising slightly. After dropping in 1992, these sectors made a dramatic recovery in 1993 and could rise again next year. Poultry and egg receipts rose nearly 10 percent this year, but could slide 1-2 percent in 1994. Milk prices are forecast down nearly \$1 for 1994, more than offsetting an expected increase in production.

For 1994 feed grain payments are forecast down 20-30 percent while wheat payments are forecast down 4-5 percent. Total program payments are forecast down over 20 percent. Disaster payments in both years have been a swing factor. Some \$500 million were paid out in the first half of 1993 for previous years' claims. Flood and drought relief for this year's crops was originally allocated at \$2.45 billion. These disaster payments will probably be disbursed as \$400-\$500 million in calendar 1993 and the rest next year. Most of the disaster payments can be expected to go to cash grain farms in the western Corn Belt. Direct payments of \$8-\$12 billion forecast for 1994 are continuing to provide 4-6 percent of gross cash income.

Cash expenses for 1994 are forecast at \$130-\$137 billion, up only 2-3 percent from 1993. The short 1993/94 feed grain crop will likely raise feed prices. Cattle, hog, and broiler numbers are also forecast to rise next year, resulting in increased feed expenses. Offsetting higher feed expenses for livestock producers will be lower feeder livestock prices. Expenses for most other inputs are forecast up 1-5 percent. Interest expenses are also expected up, reversing the downward trend of the past several years. Interest rates are expected to increase slightly in 1994, which with higher expected debt levels, will push interest expenses up 5-7 percent.

With 1994 gross cash income forecast steady to up only 3 percent, the increase in expenses will leave net cash income of \$55-\$62 billion compared with 1993's forecast \$59 billion. Net farm income, however, should rebound from its 1993 drop. While 1993 adjustments to inventories were negative, positive inventory adjustments for 1994 could add \$2-\$6 billion to total farm income. If this occurs, and a lot depends on next year's crops which are as yet unknown, net farm income could average \$47-\$54 billion, matching or exceeding 1992's record \$48.6 billion. Given the expected low ending stocks for corn and soybeans, markets are likely to be very volatile during the coming year.

New Survey Procedures Improve Published Estimates

ERS has increasingly relied on the Farm Costs and Returns Survey (FCRS) for estimating farm sector expenses, farm-related income, and off-farm income in the national farm sector income accounts. The FCRS is also used to make estimates of the financial performance of farm businesses and the total incomes from all sources of farm operator households.

A past shortcoming of using the FCRS was that the FCRS estimates of farm numbers, land in farms, and acreage and production of major crops were less than the official USDA estimates provided by the National Agricultural Statistics Service (NASS). NASS and ERS staff have been working since 1990 to develop and implement procedures to use in expanding FCRS data so that the survey would represent all U.S. farms. These new procedures also will change aggregate U.S. totals for farm production expenses, income, and other economic data. The new procedures were adopted for the survey of the 1992 calendar year completed earlier this year. Data for 1991 were also resummarized to provide a limited historical perspective of the effects of the new procedures on net farm income, farm operator household income, and the financial performance of farm businesses.

1991 Farm Number Increases Concentrated in Smallest Sales Classes

Before resummarization, the 1991 number of U.S. farms and ranches represented by the FCRS was 1,725,136. This undercount was known to be primarily in the smallest sales classes. When the data were resummarized to represent the official 2.1 million farms, the non-commercial farms (with gross sales under \$40,000) were increased 21 percent and the small commercial farms (with sales between \$40,000 and \$250,000) were increased 27 percent.

Number of farms by economic size, 1991

Sales class	FCRS number of farms		Percent change	USDA official estimate
	Original data	Resummarized data		
\$500,000 and more	41,022	41,700	1.7	41,700
\$250,000 - \$499,999	59,374	70,300	18.4	70,300
\$40,000 - \$249,999	414,197	524,400	26.6	524,400
less than \$40,000	1,210,543	1,463,500	20.9	1,463,500
All farms	1,725,136	2,099,900	21.7	2,099,900

Adjustment Raises Acreage to Within 15 Percent of Official Estimate

The 1991 official USDA total land in farms is 980.1 million acres. The original FCRS expansions only accounted for 713.6 million acres. After resummarization, the FCRS accounted for 854.9 million acres. Most of the remaining difference is attributable to Western States with large amounts of Indian reservation and grazing association land.

Land in farms and acres harvested of major crops, 1991

	FCRS summary		USDA official estimate	Remaining difference
	Original data	Resummarized data		
Million acres				
Land in farms	713.6	854.9	980.1	125.2
Arizona, Texas, New Mexico, & Montana	141.4	166.5	270.0	103.5
Other States	572.2	688.4	710.1	21.7
Acres harvested				
Corn	56.9	67.6	68.8	1.2
Soybeans	46.7	57.0	58.0	1.0
Wheat	44.7	53.0	57.7	4.7
Cotton	9.5	10.7	13.0	2.3
Rice	1.7	2.1	2.8	.7
Corn silage	5.5	6.4	6.1	.3
Alfalfa hay	18.9	23.0	25.6	2.6
Peanuts	2.0	2.0	2.0	.0
Tobacco	.8	.9	.8	.1

Effects of New Procedures on Components of Net Farm Income

Beginning with last September's issue of *Agricultural Income and Finance Situation and Outlook* and the release of the first estimates (rather than forecasts) of 1992 farm income, the FCRS was used directly to estimate many farm income components. The effects of this improved procedure can be examined by comparing last year's estimates of 1991 farm income with resummairized 1991 estimates. Gross farm income increased only 0.4 percent. Most of the change occurred with production expenses, which were revised up by 3.6 percent. This resulted in a 11.5-percent decrease in 1991 net farm income over estimates published a year ago.

A component-by-component look shows the effects of the changes on net farm income:

Gross Farm Income

- Cash receipts No effect;
Based on prices, quantities, and marketing patterns;
At State level from NASS' national survey programs.
- Government programs No effect;
Based on ASCS' administrative records.
- Other farm-related
income Affects several components:
Machine hire and custom work;
Custom livestock feeding;
Miscellaneous (recreation income, co-op dividends,
etc.)
- Non-money income Affects:
Value of home consumption of crops
Imputed rental value of dwellings (indirectly
through estimates of dwelling values).

Production Expenses

- Cash expenses FCRS is source of most components for the 48 States;
Alaska and Hawaii must be estimated separately and
added to other U.S.;
Some components are adjusted for differences in
concepts.
- Non-cash expenses Perquisites for hired labor based on FCRS;
Depreciation: indirect effect since capital
expenditures subject to depreciation are based on
the FCRS.

Net Farm Income Computed as the residual after deducting production
expenses from gross farm income.

For analysts using USDA's farm income series, we revised the accounts back to 1987, the last agricultural census.

Farm income statements

	1990	1991	1992	1993F	1994F
Billion dollars					
Cash income statement:					
1. Cash receipts	170.0	168.7	171.2	173	172 to 180
Crops 1/	80.1	81.9	84.8	83	85 to 89
Livestock	89.8	86.7	86.4	90	87 to 91
2. Direct Government payments	9.3	8.2	9.2	11	8 to 12
3. Farm-related income 2/	7.6	7.8	7.6	7	7 to 9
4. Gross cash income (1+2+3)	186.8	184.7	187.9	191	190 to 198
5. Cash expenses 3/,4/	130.9	131.4	130.2	132	130 to 137
6. NET CASH INCOME (4-5)	55.9	53.3	57.7	59	55 to 62
Deflated (1987\$) 5/	49.4	45.3	47.8	48	44 to 59
Farm income statement:					
7. Gross cash income (1+2+3)	186.8	184.7	187.9	191	190 to 198
8. Nonmoney income 6/	6.2	5.9	6.1	6	6 to 7
9. Inventory adjustment	3.4	-.3	3.8	-3	2 to 6
10. Total gross income (7+8+9)	196.4	190.3	197.7	195	201 to 210
11. Total expenses	149.9	150.3	149.1	151	150 to 159
12. NET FARM INCOME (10-11)	46.5	40.0	48.6	44	47 to 54
Deflated (1987\$) 5/	41.1	34.0	40.2	35	37 to 42

F = forecast. Totals may not add due to rounding.

1/ Includes CCC loans. 2/ Income from custom work, machine hire, recreational activities, forest product sales, and other farm sources. 3/ Excludes depreciation and perquisites to hired labor. 4/ Excludes farm households. 5/ Deflated by the GDP implicit price deflator. 6/ Value of home consumption of farm products plus the imputed rental value of operator dwellings.

Farm commodity cash receipts

	1990	1991	1992	1993F	1994F
Billion dollars					
Crop receipts:					
Food grains	7.5	7.4	8.9	8	8 to 10
Wheat	6.4	6.3	7.6	7	6 to 8
Rice	1.1	1.1	1.2	1	1 to 2
Feed crops	18.7	19.5	20.1	19	19 to 23
Corn	13.3	14.4	14.8	14	15 to 17
Barley, oats, and sorghum	2.0	2.1	2.4	2	1 to 3
Hay	3.3	3.0	2.9	3	2 to 4
Oil crops	12.3	12.7	13.0	13	12 to 14
Soybeans	10.8	11.0	11.3	11	11 to 13
Peanuts	1.3	1.4	1.3	1	1 to 2
Cotton (lint and seed)	5.5	5.1	5.2	5	4 to 6
Tobacco	2.7	2.9	3.0	3	1 to 3
Fruits and nuts	9.4	9.9	10.2	10	9 to 12
Vegetables	11.5	11.5	11.4	12	11 to 13
Greenhouse and nursery	8.5	8.8	9.0	9	9 to 10
TOTAL CROPS	80.1	81.9	84.8	83	85 to 89
Livestock receipts:					
Red meats	51.9	51.1	48.4	51	47 to 55
Cattle and calves	39.9	39.6	37.9	40	37 to 42
Hogs	11.6	11.0	10.1	11	11 to 12
Sheep and lambs	.4	.4	.5	0	0 to 1
Poultry and eggs	15.2	15.1	15.4	17	14 to 18
Broilers	8.4	8.4	9.2	10	9 to 11
Turkeys	2.4	2.3	2.4	3	2 to 3
Eggs	4.0	3.9	3.4	3	2 to 4
All dairy	20.1	18.0	19.8	19	17 to 20
Miscellaneous livestock	2.5	2.5	2.6	3	1 to 4
TOTAL LIVESTOCK	89.8	86.7	86.4	90	87 to 91
TOTAL RECEIPTS	170.0	168.7	171.2	173	172 to 180

F = forecast. Totals may not add due to rounding.

Farm production expenses

	1990	1991	1992	1993F	1994F
Billion dollars					
Farm origin inputs	39.7	38.7	38.5	40	38 to 42
Feed	20.4	19.3	19.8	20	19 to 23
Livestock	14.8	14.3	13.8	15	12 to 16
Seed	4.5	5.1	4.9	5	4 to 6
Manufactured inputs	22.0	23.2	22.7	23	22 to 26
Fertilizer	8.2	8.7	8.3	8	7 to 11
Fuels and oils	5.8	5.6	5.3	5	4 to 7
Electricity	2.6	2.6	2.6	3	2 to 4
Pesticides	5.4	6.3	6.5	7	6 to 8
Total interest charges	13.3	12.1	11.4	11	10 to 14
Short-term interest	6.5	6.1	5.8	5	4 to 7
Real estate interest	6.7	6.0	5.6	5	5 to 7
Other operating expenses	42.4	43.9	43.2	44	42 to 47
Repair and maintenance	8.6	8.6	8.5	9	8 to 10
Hired & contract labor expenses	14.0	13.9	14.1	14	12 to 16
Machine hire & custom work	3.0	3.1	3.3	3	3 to 5
Animal health	1.5	1.4	1.7	2	1 to 3
Marketing, storage, & trans.	4.2	4.7	4.5	4	4 to 6
Misc. operating expenses	11.2	12.1	11.1	11	10 to 14
Overhead expenses	32.5	32.4	33.2	33	33 to 36
Capital consumption	17.7	17.6	17.8	18	17 to 21
Property Taxes	5.7	5.6	5.8	6	5 to 7
Net rent to non-op landlords	9.1	9.1	9.6	9	8 to 10
TOTAL PRODUCTION EXPENSES	149.9	150.3	149.1	151 76	154 to 156
Noncash expenses	16.5	16.7	16.6	17	16 to 18
Labor perquisites	.5	.6	.6	0	0 to 1
Cap. cons. exc. dwellings	16.0	16.1	16.0	16	16 to 18
Landlord capital consumption 1/	-1.4	-1.3	-1.3	-1	-2 to 0
Dwelling expenses	3.9	3.9	3.8	4	3 to 5
Capital consumption	1.7	1.6	1.7	2	1 to 3
Interest	.6	.7	.6	1	0 to 2
Taxes	.6	.6	.6	1	0 to 2
Repairs & maintenance	.6	.7	.6	1	0 to 2
Insurance	.2	.2	.2	0	0 to 1
CASH EXPENSES 2/	130.9	131.4	130.2	132	130 to 137

F = forecast. Totals may not add due to rounding.

1/ Sector capital consumption minus landlord capital consumption equals net capital consumption excluding dwellings. 2/ Total expenses minus noncash and operator dwelling expenses.

Outlook '94

For Release: Wednesday, December 1, 1993

**FARM HOUSEHOLD OUTLOOK:
RELIANCE ON FARM INCOME DEPENDS ON SIZE OF FARM**

Janet E. Perry
Agricultural Economist, Economic Research Service, USDA

This summer, ERS extended the regularly published farm income tables to incorporate the average income of the households running farms, as well as net cash income to the business. These new data present a more complete picture of U.S. agriculture by adding a perspective of farm and non-farm income available to farm families.

Beginning with the 1988 Farm Costs and Returns Survey (FCRS), we began collecting data which focuses on the individuals who operate farms and members of their households. While this group is only a few of the 9 million individuals directly associated with farming, it comprises the major entrepreneurs and received most of the residual income from the agricultural production process.

Almost three-quarters of U.S. farms are very small businesses having less than \$50,000 in gross sales. The households operating these small farms receive relatively little income from farming, but they heavily influence the average farm income to the household. The purpose here is to talk about the diversity of farming and to give an idea of how farm operator households rely on net income from the farm business for their economic well-being.

The official estimate of net farm income measures proprietary income and corporate profits generated by U.S. farms and ranches. Net farm income is a component of Gross Domestic Product and can be used to compare the financial contribution to the economy of farm businesses with other businesses or investments. Estimates of farm sector business income are inappropriate measures of the financial well-being of the people who run farms. To understand what is happening at the farm and household level, we must examine farm-level data.

The new household income series is a major addition to USDA's financial data series that addresses the structure of the sector. In the past, increases in farm revenues were assumed to be distributed evenly across all families. Farm income was also assumed to be their dominant source of income. However, we know that in 6 percent of farm businesses income

is split among 2 or more households, and that income from farm production is also allocated to landlords and contractors as well as to operators. With the data collected by the FCRS, we can now measure the level of income generated by farming that goes to the senior farm operator household.

Our aim in measuring the well-being of farm operator households is to be able to compare them with other households in the United States. To make comparisons, our definitions of income to the household must match the definitions used to derive income for other households. So, we include cash income from all sources earned by all members of the household.

In the past, farmers have not been financially well-off relative to the rest of the economy. For the most part, the income gap between farm operator households and other U.S. households now has been eliminated. This is largely due to gains in off-farm income rather than in farm income. As indicated in the first figure, farming is no longer the dominant source of income for most farm operator households. Even for households operating the largest farms, off-farm income can be a significant portion of total household income. No longer is farm income as big a part of total household income of farm operators as it once was, and the level of U.S. average farm income bears little resemblance to how well individual families are doing financially.

Estimates of farm operator households' income from all sources averaged \$40,068 in 1992, about the same as the average for all U.S. households (\$39,020). Farm income was \$4,337 or about 11 percent of household income. Most off-farm income comes from wages and salaries or from a non-farm business. In two-thirds of farm operator households, either the farm operator, the spouse, or both earned off-farm wage or salary income. Off-farm sources of income also includes interest, dividends, retirement benefits such as Social Security and other non-farm sources. Ninety-eight percent of farm operator households receive some type of off-farm income. Sixteen percent earned income from operating a non-farm business of some sort.

The structure of the farm industry partly explains the large role of off-farm income. Although concentration of agricultural activities among large-scale farms continues, the U.S. still has numerous small farms. The larger the farm, the less likely the farm operator is to have a major occupation off the farm, and less likely the household will depend on off-farm income.

Total cash income of individual households varied widely-- and 8 percent actually lost money at the household level. Another 42 percent received positive income of \$28,846 or less. (\$28,846 is the median, the point at which half of the households have more income and half have less). Thirty percent received more than the average of \$40,068.

The U.S. average farm income figure masks the distribution of income across households. An average income figure combines the earnings of people who are full-time operators of large farms with those who farm part-time and depend mainly on off-farm income. Households running small farms depend heavily on off-farm income. Farms with sales between \$50,000 and \$100,00 contribute about half of the total household income. Larger farms also receive off-farm income, but the amounts are a smaller share of the total household income.

Farm types also differ in their ability to generate income. Average income combines the receipts of a household managing a small apple orchard in New York, for example, with one operating a large feedlot in Texas (see figures showing the distribution of income by commodity specialty and by size).

To account at least partially for the diversity of farming, three mutually exclusive groups of farm households have been identified (table 1). The first category--commercial farms--contains households whose operators identify farming as their major occupation and make at least \$50,000 in gross farm sales. This definition of commercial farms is more restrictive than the usual definition that focuses only on sales and ignores the occupation of the operator. The remaining farm operator households are split into 2 categories, based on whether they have adequate household income. Adequate income is indicated by having income at or above the poverty threshold for a family of four of approximately \$15,000 per year.

Commercial farms are important to U.S. agriculture. They provided most of U.S. farm production and in 1992 received 75 percent of Government payments. The majority of farms in this category are in a favorable financial position and have significant net worth. Small commercial farms (with gross sales under \$250,000) contributed, on average, \$17,373 in farm income to total income. Large commercial farms contributed over \$63,000. Sixty-one percent of commercial farm households received more income from farming than from off-farm income. But even large commercial farm households draw considerable off-farm income. The kind of off-farm income that households receive is different across farm sizes. Households running larger farms tend to receive a larger share of income from running another non-farm business and from interest or dividends. Smaller farm operators tend to receive a larger share of income from wages or salaries.

In about 1/2 of commercial farm households, someone earned money from a job or business off the farm. Households operating small commercial farms earned about 1/2 of their total income from off-farm sources. And even the large commercial farms households received about 30 percent of their household income from off-farm sources.

The dominant group of farms, in terms of numbers of farms, is the viable non-commercial farm group. These farms are viable primarily because of the households' success in off-farm pursuits. Fifty-four percent of farms are in this group and their average loss from farming of

\$817 heavily influences the U.S. average farm income. But their off-farm income brought average household income for the group to over \$50,000 in 1992. Most of the operators running viable non-commercial farms spend the majority of their work time in occupations other than farming-- and as a group they contribute a minority of total U.S. farm production. Seventy percent do not consider farming as their major occupation. An average of 80 percent of their average household income comes from wages, salaries, or an off-farm business. Another 21 percent comes from unearned income such as interest, dividends, Social Security, and other off-farm sources. Off-farm sources can exceed total household income since they offset negative farm income for those households.

Some farm operator households have neither the farm assets to generate sufficient income for the family nor the opportunities to combine farm and off-farm sources of income. Twenty-two percent of households were in this low income category, with combined income below \$15,000. Off-farm income was only \$11,550 on average, not enough to make up for the average loss of \$7,334 from farming. These farms are small whether measured by acreage, sales, or net worth. Operators in this category are generally older and have less formal education than other farm operators, limiting their off-farm opportunities.

The situation of these household raises the question of why they remain in farming if they are not making an adequate living. Since our data is a snap-shot in time, we don't know how many individual farms remain in this low income category year-to-year. Certainly, despite their low incomes in a given year, farmers have a store of wealth in their farms. The desire to "be your own boss" many serve to offset some years of low income. Some say they stay because they prefer a rural lifestyle. Cash requirements to pay off debt and cover living expenses are generally low for this group. Alternatively to farming, such as moving to an area with more off-farm jobs, may be even less financially rewarding, given their limited education and training.

Traditional farm commodity programs are most likely to have an impact on households running commercial farms and specializing in program commodities. Economic development in rural areas is probably most important to non-commercial farm households. However, while rural development may help some households improve their off-farm earnings, which in many cases make the difference between low and adequate household income, it is less likely to help elderly low-income farm operators.

The structure and composition of farming through the rest of the decade is expected to be similar to that of today. Average farm operator household income from farm sources is projected to be nearly flat (in real terms) at levels somewhat equivalent to 1991 and 1992 (see table 2).

The forecast of the farm portion of average farm operator household income is based on the short-term farm sector income forecasts, adjusted for the share of income received by operator households and the forecast number of farms. Off-farm sources will continue to

provide the major portion of average farm operator household income. The forecast of off-farm income is based on the projections of the wage compensation index for non-farm employment. Approximately 3/4 of off-farm income comes from wages or salaries and this component of household income is expected to remain dominant.

Changes in household income will be reflected in the extent that the rural economy continues to expand and persons in farm households expand their job participation in it. As the general economy improves next year and more jobs are created, off-farm income should increase. If more farmers use production contracts to spread their risks, more of the gross income generated by farm production will accrue to others outside of senior farm operator households. USDA will continue to monitor any changes in farm structure and in rural communities so that we can accurately measure the economic well-being of the people who run farms.

Table 1—Selected characteristics of farm operator households, by household type, 1992

	Household type 1/			
	Full-time commercial farms		Viable small farms	Low income
	Large	Small		
Number of households	99,651	397,916	1,125,969	448,412
Share of households (percent)	4.8	19.2	54.3	21.6
Dollars				
Household farm-related income (average)	63,037	17,373	-817	-7,334
Negative farm-related income (percent)	21.7	25.9	63.4	71.2
Off-farm income (average)	27,179	17,198	52,667	11,550
Earned income (average)	18,995	11,620	41,535	27,022
Percent reporting earned income	50.4	53.3	81.0	42.7
Unearned income (average)	8,183	5,579	11,132	5,519
Total household income (average)	90,216	34,572	51,850	4,216
Average farm net worth	1,153,240	484,018	243,163	230,626
Average government payment	17,611	7,221	982	939
Percent share of government payments	28.5	46.7	18.0	6.8
Percent				
Farm income compared with off-farm income:				
No off-farm income	23.6	17.1	2/	9.5
Farm income less than off-farm income	30.1	41.7	96.2 2/	84.8
Farm income greater than off-farm income	46.3	41.2	3.8	5.7
Type of commodity specialty:				
Cash grains	27.7	32.9	14.4	15.1
Other crops	22.7	16.4	25.3	24.4
Beef, hogs, sheep	23.8	24.9	50.2	50.5
Other livestock	9.2	3.8	8.3	6.5
Dairy	16.6	22.1	1.8	3.5
Share of value of production				
Region:				
Northeast	5.1	7.4	5.9	6.6
Midwest	48.8	57.3	36.0	35.0
South	27.1	22.7	45.5	45.7
West	19.0	12.6	12.6	12.7
Major occupation of operator:				
Farm/ranch work	100.0	100.0	29.4	65.4
Other	0.0	0.0	70.6	34.6
Average operator age	48	50	53	59
Education of operator:				
Less than high school	11.2	16.5	17.7	39.3
High school graduate	40.4	47.4	39.6	40.4
Some college	25.0	22.9	22.0	12.6
College and beyond	23.5	13.2	20.7	7.7

1/ Households operating commercial farms have an operator whose major occupation is farming. Large commercial farms have farm sales of at least \$250,000 and small commercial farms have farm sales greater than \$50,000 but less than \$250,000. We divide the remaining households into two categories: households which have income at or above \$15,000 (combining farm and off-farm income) and below \$15,000 (low income households). 2/ Two cells were combined to avoid data disclosure.

Source: Preliminary estimates from the 1992 Farm Costs and Returns Survey, all versions.

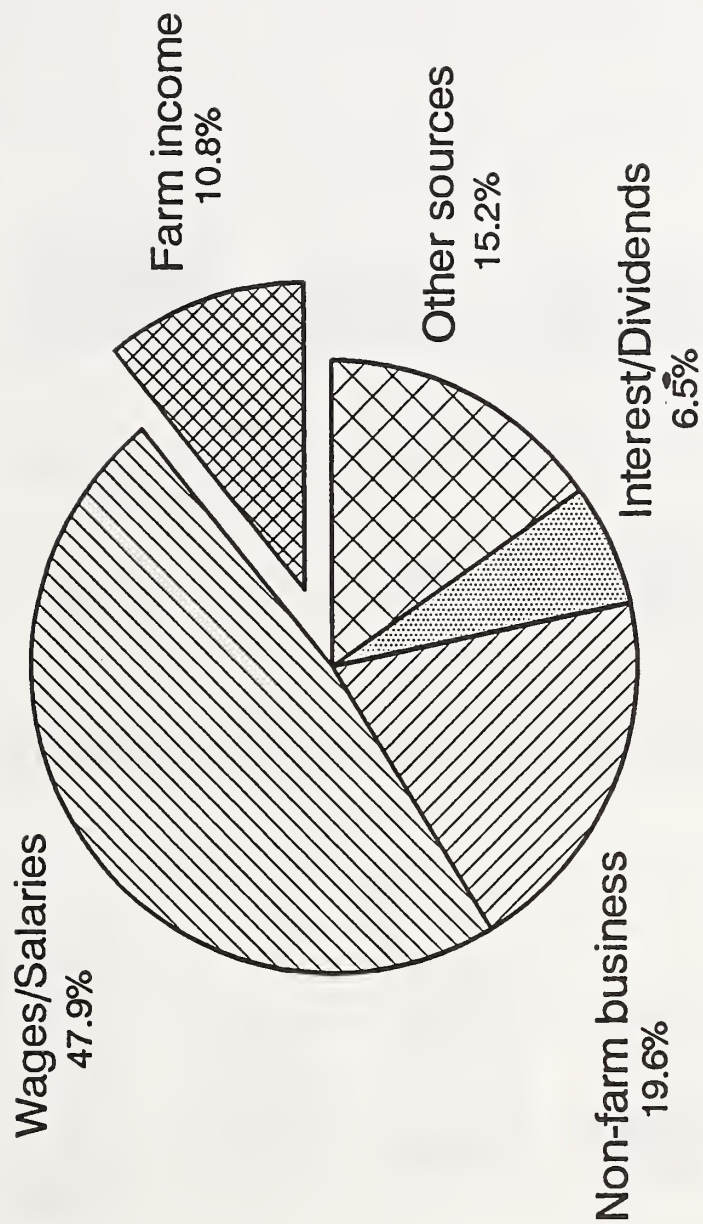
Table 2—Average income to farm operator households, 1988-93

Item	1988	1989	1990	1991	1992P	1993F	1994F
	Dollars per operator household						
Farm income to household 1/	4,201	5,796	5,742 2/	4,397	4,337	4,266 to 5,561	4,233 to 5,536
Self-employment farm income	3,386	4,723	4,973	2,283	2,829	n/a	n/a
Other farm income to household	364	1,073	768	2,114	2,010	n/a	n/a
Plus: Total off-farm income	28,829	26,223	33,265	31,638	35,731	34,954	36,457
Income from wages, salaries, and non-farm businesses	22,220	19,467	24,778	23,551	27,022	n/a	n/a
Income from interest, dividends, transfer payments, etc.	6,610	6,756	8,487	8,087	8,709	n/a	n/a
Equals:							
Farm operator household income	33,030	32,019	39,007	36,025	40,068	39,220 to 40,515	40,690 to 41,993

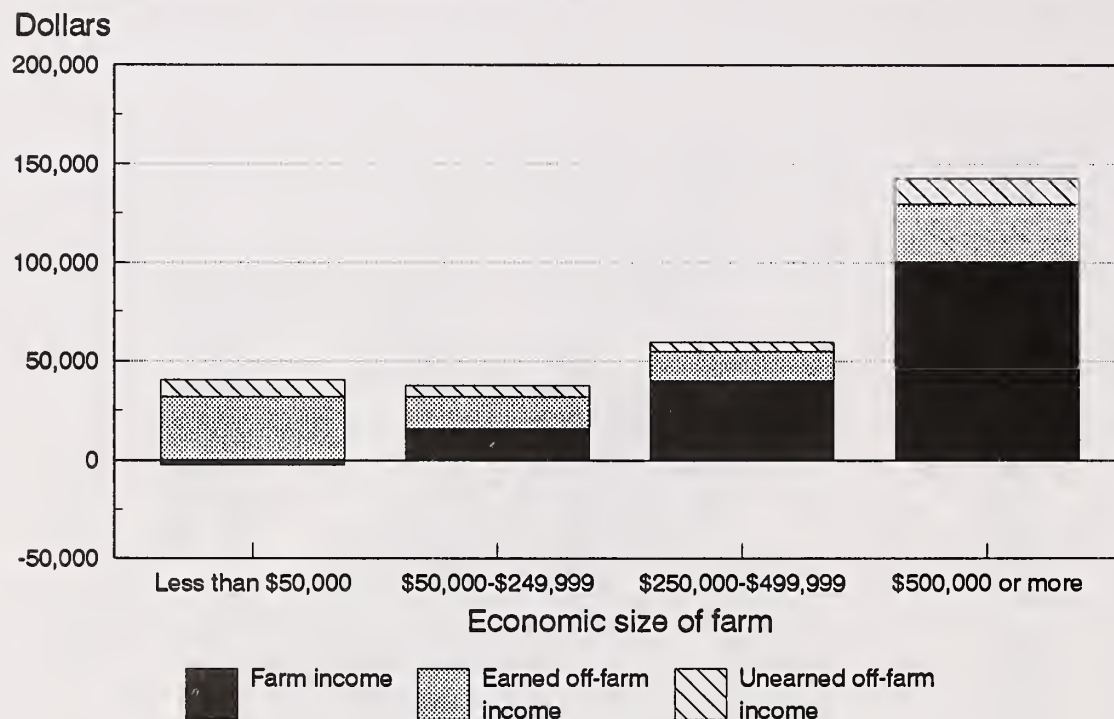
P = preliminary; F = forecast. n/a = not available. Data for 1988-90 are expanded to represent the farm operator households surveyed in USDA's Farm Costs and Returns Survey; data for 1991-92 are expanded to represent the total number of U.S. farms and ranches. Totals may not add due to rounding.

1/ Farm income to the household equals self-employment income plus amounts that operators pay themselves and family members to work on the farm, income from renting out acreage, and net income from a farm business other than the one being surveyed. 2/ If the additional 350,000 small farms included in the 1991 analysis were included in the 1990 analysis, farm income to the household in 1990 would be approximately \$4,600.

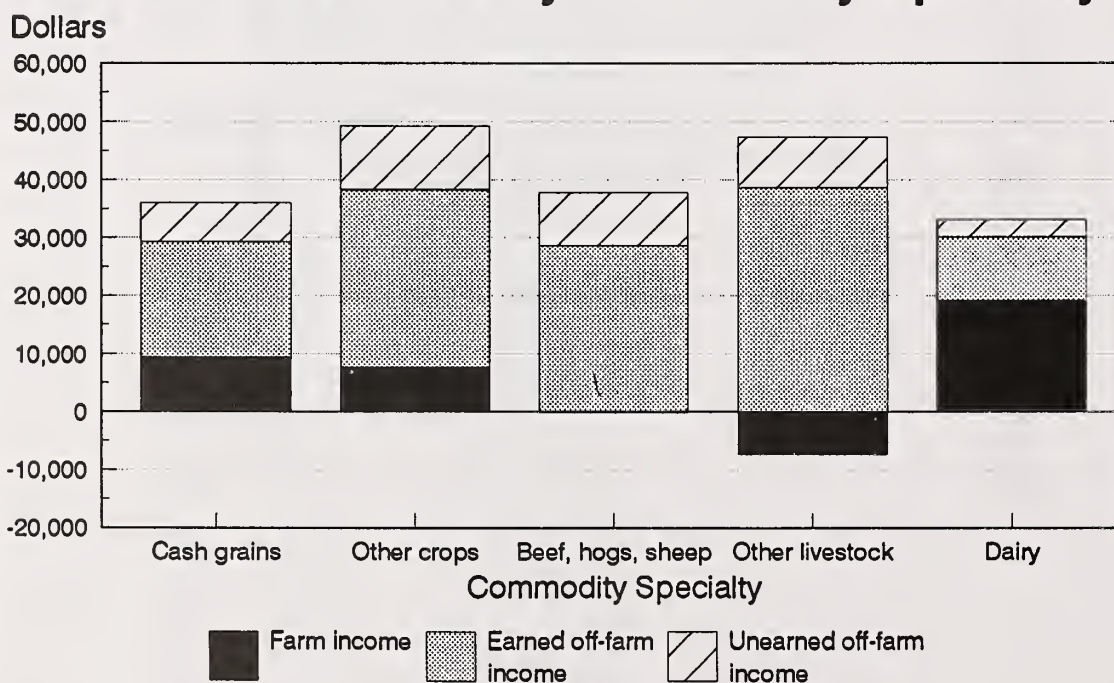
Sources of Household Income, 1992



Household Income by Economic Size of Farm



Household Income by Commodity Specialty



Outlook '94, Session # 12

For Release: Wednesday, December 1, 1993

OUTLOOK FOR CHANGES IN FARM FINANCIAL PERFORMANCE**James Ryan and Kenneth Erickson
Agricultural Economists, ERS**

Net cash income earned by farm operations in the U.S. is expected to be about \$59 billion in calendar year 1993. This is a record level of cash income earned by U.S. farm businesses, and forecasts indicate that this income measure will fall only slightly from this record level in 1994. These high levels of net cash income are being driven by favorable prices, liquidation of inventories, and higher direct government payments in an environment of relatively stable production expenses.

Not all farmers will share equally in this rising income, however, and many operators may find their financial condition deteriorating in this year of natural disasters. To benefit fully from rising prices, one must have something to sell, and those farmers who lacked stocks stored from previous years, and who were unable to harvest a normal crop in 1993, will not remember that this was a year of relative prosperity for the farm sector as a whole. Even within counties in flood- and drought-stricken areas, the financial impacts of these natural disasters varied widely among individual producers, as many farmers harvested low yield, poor quality crops.

Fortunately, most farmers entered 1993 in relatively sound financial condition. ERS research indicates that fewer than 16 percent of commercial farm operations (sales greater than \$40,000) in the Midwest flood area began 1993 with debt-to-asset ratios greater than 40 percent. This suggests that, if they can find a willing credit source, most area farmers directly affected by the flood should be able to borrow against the equity in their farm businesses to cover essential expenditures.

Within the Midwest flood region, the percentage of commercial farms entering 1993 with a debt-to-asset ratio greater than 40 percent varied from under 9 percent in Nebraska to over 20 percent in South Dakota and Minnesota. In Iowa, perhaps the State most adversely affected by the flood, about 13 percent of commercial farm operations began 1993 in this relatively high debt-to-asset ratio class.

Changes in Assets, Debt, Equity Reflect Stable Farm Economy

Nationwide, farm sector wealth will probably not rise significantly in 1994, despite the healthy levels of current farm income and the potential long-term benefits to agriculture from less restrictive international trade. In a relatively strong 1994 farm economy, the financial performance outlook is for

improved current profitability, but limited farm asset growth, slightly rising debt levels, and marginally higher equity.

The value of farm business assets is expected to rise 2 to 3 percent in 1994. This increase, coupled with a projected 1 to 2 percent rise in debt, indicates that farm business equity should increase by about 3 percent. While this moderate equity gain reflects a relatively stable farm economy, it is projected to mirror the general price level rise of about 3 percent. As a result, the real (1987\$) equity level is forecast to be unchanged during 1994, while asset and debt levels will experience slight real declines.

At the U.S. level, a stable level of real wealth is not anticipated to create financial stress, as the high net cash income should provide farm operators with sufficient income to meet their operating and debt service requirements. However, these aggregate income measures mask the diversity of individual financial situations of farm operator households, and many operators in disaster areas may experience rising financial stress.

The high net cash income in 1993 is being generated by farm business assets valued at \$878 billion at year-end. The value of farm business assets declined by almost \$260 billion from 1980 through the end of 1986. As a result of gradually rising asset values since then, almost \$154 billion of this nominal decline will be recovered by the end of 1993. Farm business debt dropped dramatically during 1985-87. During 1988-93, total farm business debt at year-end has been within the range of \$137-143 billion, suggesting that farm debt has stabilized at a level that provides for farmers' credit needs without unduly taxing the cash flows of their operations. The overall improvement in the farm sector balance sheet is indicated by the decline of the farm business debt-to-asset ratio from .23 in 1985 to .16 in 1993.

Long-term Balance Sheet Changes

The real value of farm assets in 1994 is at virtually the same level that it was in 1962. However, during this 32-year period, the inflation-adjusted level of farm debt has increased almost 15 percent. Real farm equity has generally trended downward since peaking in 1980, and is projected to be over 1 percent below its 1962 level at the end of 1994. Unchanged asset values, coupled with a higher debt load, suggests that U.S. farming will be operating with higher fixed costs, and, consequently, a less flexible financial structure at the end of 1994 than that existing over 30 years earlier.

The relative increase in debt financing is not entirely due to excessive borrowing during the 1970's. In fact, during the decade of the 1970's the growth rate of farm asset values exceeded the rate of growth in debt. At the time, the rise in use of credit was facilitated by the collateral based lending policies of farm lenders, who assisted their farm operator borrowers in gaining economies of size in production and improving efficiency through credit-financed expansion. To an extent, the rise in land values and credit use anticipated increases in earnings that did not later materialize. As a result, the U.S. farm sector found itself over-invested and over-indebted. The adjustments of asset values and debt levels to those justified by the economic returns produced by the sector are reflected by changes in the balance sheet.

The continuing high level of farm earnings in recent years, accompanied by modest nominal increases in asset values and stabilized debt levels, suggest that the farm sector entering 1994 is more cost-efficient, better capitalized, and positioned for improved potential profitability. While 1994 forecasts are generally optimistic, the farm sector is approaching the new year with caution, as uncertainty relates to both domestic macroeconomic developments and world commodity markets.

Domestic macroeconomic policy and the performance of the U.S. economy will continue to be major influences on the farm sector. Forecasts of general economic conditions suggest that real domestic GDP growth will rise from 2.8 percent in 1993 to 3 to 3.5 percent in 1994. Internationally, provisions related to agricultural commodities are highly contested in trade negotiations. U.S. food aid to developing nations and credit availability for assistance to former USSR and Eastern European countries may further impact domestic commodity prices and inventory levels. While the passage of NAFTA and potential favorable resolution of GATT negotiations will ultimately benefit U.S. agriculture, these effects will be realized as various provisions are phased in over a number of years.

These global and domestic uncertainties, coupled with other projected financial performance measures, suggest that the farm economy will experience only a moderate rate of growth in 1994, despite the relatively high level of net cash income.

Recent long-term agricultural baseline projections released by USDA's Interagency Agricultural Projections Committee indicate that both assets and debt are expected to increase at annual rates averaging 2 to 3 percent throughout the remainder of the 1990's.

Farm Asset Values to Increase Slightly

The value of U.S. farm business assets are projected to rise \$16.5 billion during 1993, an increase of less than 2 percent. Total assets are forecast to rise to a range of \$895 to \$905 billion in 1994, as the growth rate in asset values increases to the 2- to 3-percent range. These sustained moderate increases in asset values may reflect a long-run stabilization of the agricultural economy, and favorable outlook for the future. However, the real value of farm assets is projected to decline both in 1993 and in 1994, as the general rate of inflation is anticipated to exceed the growth in asset values.

The value of farm real estate assets is projected to rise slightly more than 2 percent in 1993. The relatively stable total farmland value suggests that high cash income levels, even in the presence of favorable interest rates, have not dramatically increased farmers desire to bid up land prices in attempting to expand operations. Real estate appreciation in 1994 is expected to be 2 to 3 percent.

Nonreal estate asset values are forecast to rise by about \$7 billion in 1994, exceeding 1993's gain of \$1.6 billion. Livestock inventories are expected to account for over 40 percent of this increase, as rising cattle inventories are not expected to cause a depressing effect on year-end prices. Cattle account for almost 92 percent of the value of all year-end livestock inventories.

The value of machinery on farms is expected to rise slightly in 1994, as purchases of tractors and combines are expected to rise in both 1993 and 1994. Sales of tractors over 100 horsepower are projected to be up 22 percent in 1993. This rate of increase should slow to less than 6 percent in 1994. Farm business financial assets are projected to increase. The inventory value of stored crops is anticipated to trend steady to up slightly, while the value of purchased inputs inventories is forecast to remain constant or increase modestly.

Farm balance sheet in 1994 shows improvement in nominal terms, unchanged in real terms

Item	1989	1990	1991	1992	1993	1994
Current dollars						
Assets	829.7	848.3	842.2	861.5	878	895 to 905
Debt	137.2	137.4	138.9	139.3	143	142 to 148
Equity	692.4	710.9	703.3	722.2	735	750 to 760
Deflated dollars (1987 \$)						
Assets	764.7	749.4	715.5	710.8	706	700 to 710
Debt	126.5	121.4	118.0	114.9	115	110 to 116
Equity	638.2	628.0	597.5	595.9	591	585 to 595

Farm Debt Up Slightly in 1994

Total farm debt is anticipated to increase 1 to 2 percent during 1994. Debt is projected to rise over 2 percent in 1993, marking the fourth consecutive year of increased farm indebtedness. The slight rise in debt in 1990 had ended a 5-year run of annual debt reductions. Stable land values and healthy cash income of farm borrowers are easing lenders' concern with potential loan defaults arising from land value declines.

Farm credit markets appear to have completed the evolution from the collateral based lending of the late 1970's and early 1980's. Operating in a more vigilant regulatory environment, lenders have placed greater emphasis on the borrower's ability to repay loans from current income. While farmers and lenders are relying more on overall repayment ability as the main criterion in credit decisions, they are also examining more closely the profitability of individual credit-financed investment projects. In this more cautious financial environment, farmers and their lenders continue to show restraint in incurring debt to purchase land and replace machinery and equipment.

While total farm business debt is forecast to increase slightly during 1994, the loan portfolios of individual lenders may change dramatically. The traditional institutional farm lenders, the Farm Credit System (FCS) and commercial banks, are reporting strong earnings as their performance reflects the improved financial health of their borrowers.

FCS institutions have reported higher earnings throughout 1992 and 1993, due mainly to an improved net interest margin. The higher margin resulted from the normal refinancing of maturing debt, as previously issued higher-cost debt was replaced with lower-cost debt. FCS is also benefitting from improved loan portfolio quality. While its member institutions continue to recruit quality borrowers, total FCS farm lending should increase only slightly in 1994, as both farm mortgage and nonreal estate lending are expected to rise. FCS is expected to hold about 25 percent of all farm debt at the end of 1994.

Commercial bank lending should rise by about \$1.8 billion in 1994, as banks report adequate credit availability for qualified borrowers. Rural banks in the Midwest appear to be in sound financial condition, and are reportedly working with flood victims in developing mutually agreed to repayment plans for existing loans. By year-end 1994, banks are anticipated to hold over 39 percent of all farm debt.

Farm nonreal estate debt held by banks is expected to rise over 7 percent in 1993, while loans secured by farmland are expected to increase almost 6 percent. The rise in nonreal estate loans is mainly due to an unusually high rate of loan growth in the third quarter, which is partially due to delayed demand for production loans by farmers in disaster affected areas this year. These producers may not have needed financing earlier in the year, at the normal planting time as usual seasonal financing patterns suggest.

Alternatively, reduced early season bank production lending may also be due to the rise in credit availability from input suppliers, which has substituted for the use of bank credit lines in financing agricultural production expenses. As banks are reporting more renewals and extensions this year, the seasonal pattern of fourth quarter paydowns in nonreal estate debt will likely be lower than normal in 1993.

Total Farmers Home Administration (FmHA) farm debt could fall by another \$1 to \$1.5 billion in 1994. This decrease is expected despite an anticipated rise in new issuance of FmHA direct Emergency loans, authorized in the summer of 1993 as assistance to farmers in designated disaster areas. Between September 30, 1992 and September 30, 1993 total Emergency loans outstanding declined by over \$650 million. Through September 1993, only \$58.6 million of an authorized \$115 million in Direct Emergency Disaster funds had been distributed. An additional \$162.3 million in the Emergency Disaster Direct Emergency program is available as credit for qualifying borrowers.

As FmHA shifts emphasis from direct lending to guaranteeing loans made by other lenders, it continues to work through its portfolio of problem direct loans. On September 30, 1993, 38 percent of FmHA farmer program debt was owed by delinquent borrowers. Delinquent principal and interest payments totalled over \$4.1 billion. Future FmHA direct lending activities will be affected by implementation of recent legislation, which targets assistance to beginning and minority farmers. However, this legislation also limits these borrowers'

eligibility to 10 years for FmHA direct loans, and 15 years for combined FmHA direct and guaranteed loans.

The Agricultural Credit Act of 1987 authorized Farmer Mac, a secondary mortgage market for farm real estate loans. The purpose of such a market is to provide additional liquidity to farm mortgage lending. The response to Farmer Mac has been less than enthusiastic--the first pool of loans was not completed until December 1991. By the end of 1993, Farmer Mac pools totalling less than \$700 million were outstanding. Farmer Mac pools have been formed primarily by life insurance companies packaging existing qualifying loans.

To become a major factor in the agricultural credit market, Farmer Mac will need to rely on creation of pools of new loans from a broader range of lenders. In the current environment of low interest rates, low loan-to-deposit ratios at banks, and favorable interest rate margins in the Farm Credit Systems, few creditors have an incentive to sell loans of the quality required for Farmer Mac pooling. Farmer Mac loans are included as individuals and others debt in the farm sector accounts.

Finance companies, operating as subsidiaries of farm machinery manufacturers, grain elevators, cotton gins, livestock marketing associations, and seed, feed, fertilizer, chemical, and petroleum suppliers are growing in importance as providers of short-term agricultural credit. While many input suppliers began these credit operations as a means of enhancing product sales, these units are emerging as viable profit centers for their parent organizations. To an extent, input suppliers may be providing credit to marginal producers who have been unable to obtain financing through traditional loan sources. These input suppliers may encounter collection difficulties as a result of less rigorous credit qualifying standards.

To a large extent, farm lenders were reluctant partners in the resolution of the financial crisis of the 1980's. Farm business debt fell from \$193 billion at the beginning of 1985 to an estimated \$137 billion at year-end 1989, a drop of \$56 billion. Over \$21 billion of this decline can be attributed to loan charge-offs taken by lenders during this period. During the recovery since the late 1980's, loan loss rates for all lenders other than FmHA have declined substantially. The improved quality of most lenders loan portfolios suggests that a recurrence of a large volume of problem loans is not likely in the near future.

Farm Sector Financial Performance

Relatively high rates of return on farm equity and assets are expected to continue through 1994. The rate of return on equity from current income is expected to be 3 to 4 percent in 1994.

Other measures of financial performance suggest a stable to modestly improving farm sector during 1994. Farmers are now allocating a smaller portion of their earnings to debt repayment. In 1983, principal and interest payments took 28 percent of gross cash income. With lower debt and more favorable interest rates, less than 14 percent of 1994 gross cash income is expected to be needed to meet debt service obligations. After peaking at 23 percent in 1985, the aggregate farm debt-to-asset ratio has stabilized in the 16- to 17-percent range.

Net cash income from farm operations is defined as net cash income before the deduction of interest expenses. This financial indicator measures the net cash income that is being generated by the farm sector, after it meets all non-interest cash production expenditures. It represents the cash income that would be available to the farm sector if it was debt-free and, therefore, interest expense-free. In real terms, this measure has been relatively stable since the early 1950's. The portion of this available cash that was paid as interest to farm creditors rose from less than 16 percent in the early 1970's to almost 37 percent by the end of 1981. With the rapid drop in farm debt levels and interest expenses in the mid-1980's, this ratio fell to less than 20 percent by the end of 1988. It is anticipated to remain in the 17- to 18-percent range through 1994.

Farm financial performance measures show strength in 1994

Item	1980-84	1985-86	1987-91	1992-93	1994
Percent					
Profitability					
Return on equity	0.1	1.9	3.5	3.0	3 to 4
Liquidity					
Debt service	27	24	17	14	13 to 14
Solvency					
Debt-to-asset	19.7	22.3	17.1	16.2	15 to 17
Financial efficiency					
Interest-to-gross cash farm income	13.0	10.8	7.4	5.7	5 to 6

Despite the growing net cash income from farm operations generated during the 1980's, farmers found this income depleted by the large proportion of that cash that was paid to creditors in interest payments. These indicators support the view that the economic stress of that period did not result from lower income, but from a changing financial structure that necessitated that a larger income share be distributed to farm lenders.

High Income Means Farmers Could Manage Additional Debt

Slightly higher interest expenses in 1994 should not dramatically strain farm businesses, as farmers should have adequate net cash income to fully meet their debt repayment obligations. It appears that farm operators are positioned to profitably use additional credit. In research designed to determine the extent to which farm operators are using their capacity to borrow, studies at ERS suggest that net cash income from farm operations is at a level that could support additional farm debt.

Generally, one of the most influential criterion in lenders' evaluations of loan applicants' credit capacity is the amount of borrowers' income that is

available for debt repayment. In applying debt coverage ratios to determine credit limits and maximum loan amounts, lenders effectively require that no more than 80 percent of income available for debt repayment be used for loan principal and interest payments. Lenders then use this maximum loan payment to determine the maximum loan that the borrower qualifies for, given the appropriate loan term and the current market interest rate.

Considering net cash income from farm operations as an appropriate proxy for income available for debt repayment, ERS research has analyzed farm operators' use of their debt repayment capacity since 1970. Applying a debt coverage ratio to net cash income from farm operations for each year, the maximum principal and interest payment was determined. The maximum debt that could be serviced by this loan payment was estimated at prevailing market interest rates for a 7 year repayment term. This maximum debt can be thought of as the largest line of credit that the farm sector could obtain in a given year. For the actual level of farm assets, a comparison of the actual farm debt-to-asset ratio with the maximum debt-to-asset ratio that could be supported by the available income provides insight into farmers' use of credit capacity.

Results of this research indicate that farm operators rapidly exhausted their debt repayment capacity during the late 1970's. In 1980-1982, the actual debt owed exceeded the amount that operators could service with the income their farms were then producing. While this was partially due to prevailing high interest rates at the time, those farm operators who borrowed to expand found themselves saddled with a critical mass of excessive debt. This problem farm debt worked itself out during the restructuring that took place over the remainder of the 1980's. Incomes in the mid- to late-1980's supported a higher level of debt, but, as land values declined and heavily indebted farmers experienced loan payment problems, lenders were reluctant to extend credit secured by farmland.

Entering the mid-1990's, one of the more positive farm sector economic indicators is derived by comparison of the actual debt-to-asset ratio with the maximum debt-to-asset ratio supportable by the current level of net cash income from farm operations. While total farm sector debt is about one-half that which could be repaid from current income, it also appears that debt could rise by about 20 percent without producing an uncomfortably high sector debt-to-asset ratio. This is not to suggest that farmers should again dramatically expand their borrowing activities, but only to indicate that the farm sector appears to have the capability to safely acquire additional debt. This indicates that the sector is better financially positioned to absorb short term regional losses, such as those occurring in 1993, than it would have been 8 to 10 years ago.

Conclusions: Farm Sector Growth Slow, But Steady

While most financial performance measures point to an improved farm economy, all is not positive for the sector in 1994. As the rest of the economy experiences sluggish growth, the cash income levels of 1993 and 1994 will depend on relatively high government payments. Some farmers will make financial progress in 1994, and most will be able to avoid major set-backs.

Overall, the financial position of farmers entering 1994 appears to be greatly improved compared to that of the mid 1980's. While the combined effect of

gradually increasing asset values and debt loads reduced to manageable levels have greatly lowered farmers' vulnerability to short-term fluctuations in income, the prospect of long term declining real equity values reduces the investment appeal of agricultural land.

As the globalization of world markets further unfolds in the 1990's, politically resolved trade and assistance issues may significantly change economic relationships. The market conditions emerging from trade reform and agreements can be expected to greatly affect the sector's financial performance and well-being.

Outlook '94

For Release: Wednesday, December 1, 1993

OUTLOOK FOR COTTON

Robert A. Skinner, Leslie A. Meyer, and Stephen MacDonald
Agricultural Economists
Economic Research Service, USDA

Keeping cotton competitive in U.S. and foreign markets continues to dominate the prospects for our producing, marketing, and milling sectors. Given the budgetary pressure on reducing farm program outlays, cotton, like other commodities, will face new challenges in maintaining a viable industry. In addition, the market reforms taking place in various countries and the effects of NAFTA and a potential GATT agreement will certainly impact the structure of the U.S. cotton industry in the future.

Outlook for 1993/94**U.S. Production and Consumption**

U.S. cotton production is expected to total 16.3 million bales, slightly above the 16.2 million in 1992. Upland production is forecast at 15.9 million bales and extra-long staple at 392,000 bales. Although planted area increased by 3 percent, harvested area rose 18 percent (2.1 million acres) above last season. The national average U.S. cotton yield is forecast at 594 pounds per harvested acre, down 105 pounds from 1992, and the lowest since 1986.

Crop conditions have declined dramatically since early-season prospects for a large crop (18.5 million bales were forecast in August). Insect damage, as well as weather-related problems, forced the production estimate to fall. However, cotton production in the Southwest is estimated at 5.5 million bales, a whopping 56 percent above the weather-plagued crop of 1992. Consequently, this region is expected to provide the only yield increase from last season. Yields in the Southwest are anticipated to be 460 pounds per harvested acre.

In the Delta, production is expected to fall below 5.0 million bales, compared with 6.5 million last season. Yields in all Delta States are nearly 200 pounds or more below 1992 yields. The only exception is Louisiana, which is over 100 pounds below a year ago.

Overall, the Delta yield is projected at 565 pounds per harvested acre. The forecast for production in the West is near last season's at 4.0 million bales. With a slightly lower projected yield (1,222 pounds), and acreage near 1992's, this region is expected to produce about 25 percent of the 1993 U.S. cotton crop.

In the Southeast, production is placed at 1.9 million bales, also below 1992. Disappointing yields are prevalent in this region as well, with Alabama and Georgia over 200 pounds below last season. The average yield for the region is estimated at 538 pounds, 150 pounds below 1992.

U.S. planted acreage this season is placed at 13.7 million acres, 400,000 above last season. The acreage increase was attributable to a decrease in the acreage reduction program (ARP) for upland cotton from 10 to 7.5 percent. Harvested area is projected at 13.2 million acres, reflecting a national average abandonment of 3.6 percent, well below the previous 10-year average of nearly 8 percent.

Domestic mill consumption of cotton last season totaled 10.25 million bales, the highest since 1950. In 1993, mill use is projected to slightly exceed the 10.25-million-bale mark. The U.S. Department of Commerce recently released the preliminary October and revised September consumption data. U.S. mills consumed 2.7 million bales of cotton during the first 3 months of 1993/94, 1.6 percent above the previous year. Domestic mills used approximately 41,500 bales per day in October versus 40,200 bales during September. On a seasonally adjusted annual rate basis, consumption during August through October averaged 10.2 million bales, respectively.

Cotton mill use is expected to remain strong as consumer demand, particularly for denim, continues robust. Continued strong demand for cotton textile exports is also expected to support consumption. Cotton textile exports are expected to reach a record 960 million pounds. Textile exports during the first 10 months of 1993 totaled 713 million pounds, 14 percent above the same period a year earlier. However, imports of cotton textiles have also risen. Imports during the January-October period totaled 2.76 billion pounds, up nearly 13 percent from 1992. Despite rising exports, the cotton textile trade deficit may exceed 5-million bale equivalents and represent more than one-third of total domestic cotton consumption.

Cotton fiber continues to capture three-quarters of the fiber used on the cotton system. In October, cotton's share equaled 76.0 percent, compared with 75.7 percent in both August and September. Mill-delivered 1-1/16 inch cotton prices dropped to 61 cents per pound (raw-fiber equivalent) in October, 3 cents below August. These prices have declined for the third consecutive month; however, prices for polyester staple have remained constant for the past 4 months at 75 cents per pound (raw-fiber equivalent). With cotton prices moving lower in October, the cotton/polyester price ratio fell to 0.82, compared with 0.83 in October 1992. With prices favoring cotton use and the continued

success of natural fibers, mill consumption of cotton should continue near current use.

Foreign Production and Consumption

Foreign cotton consumption is expected to grow again in 1993/94, while production remains at 66.3 million bales. Lower production in China is projected to offset gains in Pakistan, the former Soviet Union (FSU), and India. Foreign consumption is expected to rise barely 1 percent, to 76.4 million bales, but ending stocks will fall at a growing rate in 1993/94. Foreign ending stocks are projected to decline from 33.8 million bales to 29.1 million, down substantially from 1991/92's 37.1 million bales.

Improved weather raised yields for most foreign producers this year. Average foreign yields climbed from 457 lb/acre in 1992/93 to 490 lb/acre, above the average of the previous 5 years. However, lower area--a 4.7 million acre decline to 64.9 million acres--offset yield gains. Production is expected to remain below the levels seen during 1988/89-91/92, and 13 million bales lower than 1991/92's 78.4 million bale record-high.

China accounts for most of this year's decline in foreign area. China's cotton area dropped from 16.9 million acres to 13.1 million as farmers switched to other crops in the wake of last year's poor weather and bollworm infestation which reduced yields. Cotton appeared even less attractive after farmers received IOU's rather than cash from China's Cotton and Jute Corporation. Farmers switched to a wide variety of crops in 1993/94--including corn, peanuts, and vegetables. With lower area offsetting improved yields, China's production is expected to fall from 20.7 million bales to 19 million.

Improved yields in India are expected to result in a record harvest for the second year in a row, up about 2 percent to 10.8 million bales. Good summer rainfall in cotton producing areas drove yields to near-record levels, and September's earthquake near India's cotton producing areas appears to have had little impact on the cotton harvest. Dry weather did reduce yields in Gujarat and Rajasthan, but good rains in September helped boost production in Maharashtra and Andhra Pradesh.

While Pakistan's crop is forecast up from last year's disease-reduced level, insect damage has hurt production. In 1992/93, Leaf Curl Virus (LCV) drove Pakistan's crop down from 10 million bales to 7.1 million. In 1993/94, farmers in Pakistan planted varieties resistant to LCV and were instructed to destroy diseased plants immediately. However, fieldwork slowed during Pakistan's election and a whitefly infestation and a return of LCV reduced yield potential. Yields are still expected to surpass last year's lows, and production grow 700,000 bales to 7.8 million.

FSU cotton production is expected to reach 10.1 million bales this year, up nearly 700,000 bales. This would be the first increase in production since 1988. Area is stabilizing after a prolonged decline, and fell less than 2 percent to 7 million acres.

Weather during 1993/94 was a significant improvement over last year's cold, damp early season conditions. Yields are also expected to increase because farmers will be allowed to sell a greater portion of their crop on the free market.

In contrast with stagnant foreign production, a slight gain is expected during 1993/94 for cotton's foreign consumption, up 1 percent to 76.4 million bales. China's consumption is expected to fall slightly, but increases are foreseen for demand by most of the larger consumers, and for most of the larger cotton producers.

As has been the case in recent years, much of the gain in consumption is expected to occur in countries that also produce cotton. As a result, global consumption is growing faster than world trade in cotton, and less than one-third of the 86.7 million bales of expected worldwide cotton consumption in 1993/94 is expected to be traded.

China is an important exception to the trend this year. In 1992/93, China's consumption surged to 21.7 million bales from 19 million. A surging economy during 1992/93 and lower inventories of textile products in China led the government to relax the pressure exerted earlier to push textiles products out of storage. This year, although China's economy apparently remains robust, China's monthly yarn production has been below year-earlier levels. A nationwide effort to prevent the economy from overheating has affected the ability of some industries and regions to secure credit, and has perhaps affected cotton consumption.

India and Pakistan are expected to consume more cotton during 1993/94. India's consumption is expected to gain 3.5 percent--to 9.7 million bales--and Pakistan's 5.5 percent--to 7 million bales. This would mark 10 consecutive years of increasing cotton consumption for Pakistan. A little more than a decade earlier, Pakistan consumed 2 million bales annually.

Much of the consumption gains in cotton producing countries like India and Pakistan has come at the expense of traditional cotton importers. The traditional cotton importers of East Asia have seen their domestic yarn production displaced in recent years, and in 1993/94, lower cotton consumption is again expected. Japan, Korea, and Taiwan are expected to consume nearly 650,000 fewer bales of cotton than last year, with a similar reduction in imports. Between 1960 and 1991 the world consumption share of these three importers ranged between 9.5 percent and 7 percent, but is expected to total only 5.3 percent in 1993/94.

Decreased use is also expected in the European Community (EC). With consumption falling from 5 million bales to 4.8 million, EC imports are also expected to weaken. Imports are expected to fall less than consumption--from 4.3 million bales to 4.14 million--and the EC is expected to again import more cotton than any one country. However, the EC will finally relinquish its position as the world's top importing region.

Southeast Asia is expected to import 4.3 million bales in 1993/94, more cotton than the EC. Driven by growing textile exports, Southeast Asia's cotton consumption is approaching EC levels. Recent gains have been tempered by the relatively sluggish recovery of some industrialized markets for Southeast Asian textiles. Performance this year is mixed with cotton consumption and imports falling in Thailand, imports falling in the Philippines, and growth continuing in Singapore and Indonesia.

Projected cotton consumption gains in Southeast Asia, Asian cotton producing countries, Latin America, Russia, and Eastern Europe mean a year-to-year gain in foreign consumption. However, foreign consumption is expected to remain below peaks reached at the end of the 1980's. Weak consumption in Russia continues to hold foreign consumption below earlier peaks. A 280,000 bale increase in cotton use is forecast for Russia in 1993, one of the largest expected in any country. But, even with the forecast increase to 3 million bales, Russian consumption is still expected to be about half of what it was in 1985.

As production stagnates and consumption moves upward, lower ending stocks are expected in 1993/94. As was the case last year, much of the decline is expected to come in China's high stocks. After China's near record 1991/92 crop built world and Chinese stocks to recent highs, world prices dropped significantly. Although, the world stocks-to-use ratio fell in 1992/93, prices also fell. An even more favorable change is expected in the global stocks-to-use ratio in 1993/94 dropping from 45 percent to 39 percent. However, year-to-date the season average of the A-index was only slightly higher as of the end of October, 56 cents per pound compared with 55 cents a year earlier.

World Trade

World cotton exports are forecast at 26.6 million bales in 1993/94, 7 percent above last season, but nearly 7 million below the 1986/87 record. In addition, foreign exporter's shipments are expected to rise from 19.6 to 20.7 million bales this season.

Weakly growing Russian consumption and rebounding Central Asian production means an increased availability of low priced cotton from the FSU. Uzbekistan's exports are expected to jump 500,000 bales to 5.9 million bales, their largest exports in 4 years. Turkmenistan's exports are expected to rise from 1.8 million bales to a record 1.9 million, but slightly lower exports are expected from Tajikistan and Azerbaijan. Larger exports are also projected for India and Pakistan.

Prospects of increased net exports from the FSU have maintained downward pressure on prices, and discouraged planting in some countries. Exports from the Franc Zone countries of West Africa are expected to fall in 1993/94, with much of the decline stemming from reduced area or reduced input use resulting from the lower prices.

Low prices have also played a role in reducing area being planted to cotton in Brazil and Colombia. In 1991/92, Brazil had 4.9 million acres of cotton, but area fell more than 1 million acres in 1992/93, and another 1.1 million drop is foreseen. Brazilian fiber demand continues to grow, and imports are expected to gain nearly 700,000 bales, a 76 percent increase. This pattern of sluggish production and burgeoning demand has been repeated elsewhere in Latin America, and traditional exporters such as Brazil, Mexico, Colombia, and Central America are all expected to increasingly import more cotton than they export.

Despite more competitive prices, foreign competition is likely to limit U.S. exports again this season. Exports are projected at 5.9 million bales in 1993/94, up 14 percent (700,000) from last season's dismal shipments. The anticipated rebound in shipments this season is based, in part, upon export commitments to date. By mid-November, upland commitments (shipments plus outstanding sales) were 6 million running bales, well above the previous two seasons. However, the destination of about 1.6 million bales remains unknown at this time.

The rebound in U.S. exports is expected to push the U.S. share of world trade up one percentage point to 22 percent in 1993/94. As with the total, U.S. trade shares to most of the major markets are projected to improve from 1992/93. Japan and Korea are expected to remain the largest markets for U.S. cotton, with Mexico running third. China is foreseen as a buyer of U.S. cotton this season, accounting for about 60 percent of their projected imports.

Outlook for 1994/95

Foreign Production and Consumption

Prospects for foreign production in 1994/95 are highly uncertain. On the one hand, China announced in September that it would raise its procurement price for cotton from 6.0 yuan/kg to 6.6 yuan/kg. In the wake of two years of declining production in China, other policies are also expected to shift towards encouraging increased production. On the other hand, China's bollworm problem--if it continues--holds the potential to offset efforts to increase production, and makes production more difficult to foresee.

Similarly, Pakistan's yield was reduced in 1993/94 by whitefly infestation and by the need to use lower-yielding varieties resistant to LCV. If Pakistan can resume the strong yield growth it demonstrated before these problems appeared, then 1994/95 production could be higher.

The FSU presumably has the potential to produce more cotton. The region's average

yield recovered with improving weather in 1993, close to its 1988-1991 average. However, area and production were well below earlier levels. Ecological concerns and efforts to diversify agricultural production will perhaps continue to offset the need to pursue the additional foreign exchange earnings that higher cotton production and exports would bring. In total, foreign cotton production in 1994/95 could range between 69 and 72 million bales.

For consumption, the likely direction of change is clearer. Higher foreign cotton consumption is likely in 1994/95 as economic growth in the developing world has been approaching levels last seen at the beginning of the 1980's, and strengthening economic growth in the industrialized world would offer a further boost. The long-term consumption growth rate (1970/71-92/93) is about 1.3 percent per year. Foreign consumption could repeat 1993/94's 1 percent growth or improve to its long term average, suggesting a 1994/95 consumption level ranging from 76 to 78 million bales.

World Trade

International cotton trade will not necessarily grow as fast as foreign use as producing countries increasingly manufacture textile products for export as well as domestic consumption. The 20 year trend of the ratio of imports-to-use has declined on average 0.6 percent per year. This reflects the limited upward movement in world trade, as consumption is rising in producing, rather than importing countries. It is unclear if a gain in textile consumption large enough to sustain use in the traditional importing countries is possible. World trade might grow slightly in 1994/95, but could remain below 27 million bales for the third consecutive year.

With 1994/95 world trade near this season's level of 26.6 million bales, and available exportable supplies in FSU, India, and China, the potential for increased U.S. exports could be limited. However, U.S. shipments are expected to range between 6 and 7 million bales, assuming the competitiveness provisions in the Farm Act keep U.S. cotton prices in line with foreign exporters.

U.S. Production and Consumption

The early-season outlook for 1994/95 U.S. upland cotton points to smaller acreage, but a rebound in yields could move production above this season's. The smaller acreage is based, in part, on the premise that the 1994 upland cotton ARP will be higher than last season. A preliminary 17.5-percent ARP was announced on November 1, compared with 7.5-percent in 1993.

The 1990 Farm Act requires that the upland cotton ARP be set at a level which will result in a projected stocks-to-use ratio of 30 percent. Based on USDA's October supply and use estimates, the announced 17.5-percent ARP requirement was consistent with this

ratio. The final ARP can differ from the preliminary announcement if supply and demand conditions warrant an adjustment. Since the final ARP must be announced by January 1, it will be based on USDA's December supply and use estimates.

Enrollment in the 1994 upland cotton program is expected to decrease slightly from this season due to an expected higher ARP. If yields return to trend levels in 1994, and abandonment is close to the 10-year average of 8 percent, upland production could rise above this year and total between 16 and 17 million bales.

Domestic consumption in the United States should remain strong again next season as well. Competitive cotton prices, relative to manmade fibers, and the continuation of consumers' preference for natural fibers contribute to this strength. Domestic consumption in 1993/94 could range between 10.2 and 10.7 million bales. Several factors that could alter this range include: the rate of growth in the general economy; consumer confidence; the level of apparel sales, especially denim and sportswear; and the continuing impact of textile imports.

Extra-long staple cotton acreage and production will likely remain near this season in 1994/95. Details of next year's ELS program will be announced by December 1. Low prices this season and relatively high stocks should encourage similar participation in the 1994 ELS acreage reduction program as last season. On October 6, USDA requested comments on the 1994 ELS program options. Four options were considered, with ARP levels between 15 and 30 percent. Acreage and production are expected to vary only slightly among each option, with production ranging from 382,000 to 400,000 bales.

U.S. exports of ELS cotton will continue to dominate demand. In 1994/95, ELS exports are likely to improve as foreign consumption is projected to continue its rebound after declines in 1991 and 1992. The United States is expected to continue as a large supplier of ELS cotton to the world, with exports projected between 355,000 and 365,000 bales. Mill use is projected to remain near this season's 65,000 bales. With total use projected to exceed production in 1994/95, ending stocks are forecast to decline moderately from this season's estimate of 173,000 bales.

Overall, the 1994/95 season could result in larger production and exports, and continued strong domestic use. While U.S. stock levels are expected to remain about unchanged, foreign stocks could continue to decline. If higher world cotton prices result, more U.S. cotton could be consumed by domestic and foreign mills, with lower government outlays than in the past several years.

Table 1--World cotton supply and distribution, 1989/90-1994/95

Countries	1989/90	1990/91	1991/92	1992/93	1993/94	1994/95
Million 480-lb. bales						
Beginning stocks:						
World	31.8	26.2	28.5	40.6	38.5	34.0
U.S.	7.1	3.0	2.3	3.7	4.7	4.9
Foreign	24.7	23.2	26.2	36.9	35.8	29.1
Former Soviet Union	2.0	2.0	3.4	3.8	3.2	2.7
PRC	6.0	4.4	6.4	14.5	13.1	10.6
Pakistan	0.7	1.2	1.6	3.0	2.2	1.6
Other Exporters	7.9	7.8	7.7	9.6	11.4	8.6
Importers	8.1	7.8	7.1	6.0	5.9	5.6
Production:						
World	79.8	87.0	96.0	82.5	82.6	
U.S.	12.2	15.5	17.6	16.2	16.3	
Foreign	67.6	71.5	78.4	66.3	66.3	
Former Soviet Union	12.2	11.9	11.3	9.4	10.1	
PRC	17.4	20.7	26.1	20.7	19.0	
Pakistan	6.7	7.5	10.0	7.1	7.8	
Other Exporters	26.4	26.5	26.1	24.1	24.5	
Importers	4.9	4.9	4.9	5.0	4.9	
Imports:						
World/Foreign	32.8	30.7	29.2	26.2	26.4	
Former Soviet Union	0.4	0.2	0.1	0.1	0.1	
PRC	1.9	2.2	1.6	0.3	0.5	
Other Exporters	3.8	4.1	6.1	6.1	6.6	
Importers	26.7	24.2	22.0	19.7	19.2	
Consumption:						
World	86.6	85.5	84.4	86.0	86.7	
U.S.	8.8	8.7	9.6	10.3	10.3	
Foreign	77.8	76.8	74.8	75.7	76.4	
Former Soviet Union	9.2	8.7	7.6	5.5	5.8	
PRC	20.0	20.0	19.0	21.7	21.5	
Pakistan	4.8	5.6	6.5	6.6	7.0	
Other Exporters	15.1	15.8	17.0	20.4	21.0	
Importers	28.7	26.7	24.7	21.5	21.1	
Exports:						
World	31.3	29.7	28.3	24.8	26.6	
U.S.	7.7	7.8	6.7	5.2	5.9	
Foreign	23.6	21.9	21.6	19.6	20.7	
Former Soviet Union	3.3	2.0	3.3	4.6	5.0	
PRC	0.9	0.9	0.6	0.7	0.5	
Pakistan	1.4	1.4	2.1	1.2	1.3	
Other Exporters	14.9	14.9	12.3	9.9	10.7	
Importers	3.1	3.0	3.3	3.2	3.2	

Source: USDA, Foreign Agricultural Service.

Outlook '94

For Release: Wednesday, December 1, 1993

TED'S DEMISE?

Keth Henley
Director, Cotlook Ltd.

When Russ invited me to provide the industry's response to the Department's outlook for cotton in the coming months, the only bright spot seemed to be domestic mill consumption. At the time,

-- prospective US production was one and a half million bales higher than it is today,

--weekly export sales were stagnant. Shippers had little work other than to complete the second half of their Spring double play by finding a home for 53 percent of the almost 5 million running bales of upland cotton they sold with the aid of a six and two-thirds cent Step 2 payment,

--there was no reason to believe that the Memphis Territory wouldn't be full of nice Middling cotton and that the Texas High Plains once again could be counted on to provide an ample supply of coarse count qualities to satisfy spinners both here and overseas,

--and only one commission house was consistently calling for higher prices just around the corner.

It was my intention to ask Ted here to accentuate the gravity of the situation -- not so much that of an industry mired in deep recession (after all he isn't a grizzly), but simply to illustrate that there was little in the way of fundamentals to portend a market reversal. The idea, of course was to talk about what began the season as the second largest crop in US history, poor export demand beyond that covered by the 663-point certificate, and consequent ending stocks which were forecast almost 25 percent higher than 1993/94 at 6,000,000 bales.

Isn't it amazing what a few weeks can do? Take a breather, Ted.

So what now is the industry's perspective on the outlook for cotton over the next, say, 20 months. Well, for the balance of the '93/94 season, it's doubtful many in this room would argue with the USDA's own ideas. Foreign production and mill use seem to be well honed for the remainder of the marketing year, though legitimate question may be raised with regard to Chinese production. If the State Statistical Bureau in Beijing proves correct, for instance, an upward adjustment will be necessary.

Here at home, the size of the crop probably is about right, though you'll find a few diehards (such as myself) who still want to push Texas up a bit.

There does, however, seem to be a growing divergence of opinion regarding mill use. For the moment, 10,300,000 bales may be reasonable, but for some weeks now we've heard of textile inventory buildups which have caused more and more spinners to issue bill-and-hold orders to cotton merchants.

Moreover, the rather robust demand for the bottomweights, which contributed heavily to the 10,250,000-bale offtake last season when the requirement for lighter-weight print cloths already had weakened, seems to have waned in recent weeks to the extent that at least a few mills prolonged their Thanksgiving holiday and plan to do likewise at Christmas. Would anyone question the unease with which textile manufacturers view consumer spending for apparel products during this important holiday period?

As we look to 1994/95, however, the picture in our mind's eye is not so clear.

One by one, commission houses have begun to build the case for a market reversal. Quite rightly, they point to a number of considerations. They include:

- an imbalance this season in the traditional quality mix contributed from the major US growing areas which, combined with an increase in the 1994/95 acreage reduction percentage, leaves the perception of a restricted supply and consequent lower ending stock,

- slow but steady US economic growth with the aid of low interest rates and brighter prospects for an economic reversal within the European Community, and

- a reduction in the foreign stocks-to-use ratio from last season to this while the US has held constant, which suggests that as the competition's share of ending stocks falls, the US will

benefit from its seemingly perennial role as the world's residual supplier.

Overseas, meantime, you may be confident growers will try their utmost to produce larger crops as the US area to cotton contracts.

A change in the political climate seems to have encouraged an entrepreneurial climate for agriculture in general in China. After an ill-fated attempt to pay growers with IOUs last year, however, Beijing has been convinced that only cash payments have any chance to succeed in boosting production. This, of course, begs the question as to from where hard currency will be obtained. China has proven itself an aggressive exporter of textile products, and with a return to normal production levels, significant quantities of raw cotton may once again make their way into the world trade.

On the Indian sub-continent, everything depends on seasonal monsoons. Annually, India plants the largest area to cotton than any other country in the world, but a myriad of varieties, few of which have the benefit of irrigation, typically serve to limit yields below those levels that would be acceptable in the more advanced countries. Both India and Pakistan, however, recognize the importance of raw cotton has a generator of hard currency and may therefore be expected to remain important players in the global export trade of the industrial fiber, so long as domestic mill needs are first satisfied.

The Central Asian republics, meanwhile, continue in their struggle to shift from command to demand economies, and with the aid of Western assistance have slowly begun to learn the intricacies of free market merchandizing. This isn't to say, however, that barter trading will not remain an influential aspect of the Western cotton man's life for the foreseeable future. Moreover, cotton from Central Asia can be expected to remain among the least expensive growths traded internationally. With no means of price support and an infrastructure that virtually demands disposal of the raw product, producers and their selling representatives will have no choice but to price their product at market clearing levels throughout the season.

Despite the likelihood of a higher upland Acreage Reduction Program in 1994, total US production probably will be greater than the 16,300,000 bales being harvested this season. The National Agricultural Statistics Service's November reduction in prospective outturn should provide Secretary Espy the evidence he needs to put the official '94 ARP somewhere below the provisional level of 17.5 percent, but differences of opinion regarding how

much upland cotton will be planted outside the program, and what the potential yield is, suggest the final ARP may not be significantly lower. Something between 10 and 15 percent probably will result from the Department's final deliberations, and since no one foresees a second year of late crops and disastrous insect damage across the Memphis Territory or abnormally low boll weights for West Texas, total production nearer the 17,000,000 or even 18,000,000-bale mark shouldn't be considered unrealistic.

As far as offtake is concerned, the ongoing modernization of the US textile industry virtually assures annual raw cotton consumption in excess of 10,000,000 bales and a revival in textile demand for medium and coarse count fabric could push usage to 10,500,000 bales or more. Strong competition from foreign producers, meantime, probably will hold exports to no better than 6,500,000 bales.

None of this is particularly price bearish, considering the competition will be no different from the past, but the US industry has a number of longer term obstacles to hurdle at home as it strives to maintain market share -- none the least of which is the development of 1995 farm legislation.

At best, cotton may be able to hold what has under the 1990 Farm Act, but more than likely it will lose some benefits and see significant revisions to other.

A review of the Step 2 User Marketing Certificate provision of the Upland Marketing Loan Program already is under way by the USDA and a proposed rule change to insure equity among all participants is expected before the end of the month.

Meantime, as Congress begins its considerations of new farm legislation for 1995, there will be no surprise if another attempt is made to increase the percentage of the Crop Acreage Base not eligible for deficiency payments. Such an effort was defeated in a measure to rescind spending authority for various entitlement programs during the next five years as Congress prepared to recess for the year-end holidays, but a staggering budget deficit guarantees further attempts to cut federal outlays.

Several factors will determine the direction of new farm legislation and the extent to which the government is prepared to support commercial agriculture. The most important, however, is the 1995 fiscal year budget and whether current levels of agricultural supports are maintained, or cut drastically.

Commodity groups here in Washington already have acknowledged that

a sizeable reduction in commodity program funding could force the most extensive change in agricultural policy since the institution of the target price system under the 1970 Farm Act. Under the guise of risk management, a program in which producers pay a premium for "gross revenue insurance" has tentatively been discussed, though few details exist.

So-called "green payments" also have been mentioned as a means with which production agriculture might be indirectly supported. As the urban influence has continued to grow in Washington, the rural sector has long recognized the mounting difficulty of persuading Congress to continue to approve direct payments to growers. Alternatively, however, the growing emphasis on maintaining a clean, safe environment has offered the potential for compensating farmers for their stewardship of the land.

Finally, trade will also be an important factor in the development of new farm legislation. With the impending implementation of the North American Free Trade Agreement, Congress may now devote its attention toward the completion of the Uruguay Round of the General Agreement on Tariffs and Trade. Signatory countries are scheduled to initial the long-delayed framework on December 15, and although a reduction in the Export Enhancement Program is the only "hit" agriculture is suppose to sustain, there is concern in some quarters that the GATT has finally guaranteed global fair trade regarding market access and export subsidies, therefore a continuation of price support programs at current levels is no longer necessary.

So, what now do we do with Ted? Should he be resurrected to pressure the market because of the longer term unknown, or shall we allow him to lie in peace - a victim of a supply imbalance amidst a slowly improving world economy? Considering the cyclical nature of the beast, both will prove correct. It's the matter of timing that will prove who profits and who does not.

Outlook '94

For Release: Wednesday, December 1, 1993

TRADE OPPORTUNITIES AND THREATS FOR U.S. TEXTILES**Carlos Moore**

Executive Vice President, American Textile Manufacturers Institute

Introduction

The two major trade issues before the United States today have distinctly different impacts on the U.S. textile industry.

The North American Free Trade Agreement (NAFTA), less than two weeks old at the time of this conference, creates tremendous growth opportunities for the U.S. textile industry and its suppliers. Under NAFTA, North America becomes a single market of 370 million customers in which U.S., Canadian and Mexican producers have preferential access over other countries. NAFTA provisions on rules of origin and customs enforcement ensure that textile companies in North America will have advantages and outsiders will not be able to use NAFTA as a duty-free channel for goods made outside the continent.

Conversely, the Uruguay Round of trade negotiations being carried out under the General Agreement on Tariffs and Trade (GATT) holds no such promise for the U.S. textile industry, but in fact, could threaten the industry's survival. The Uruguay Round proposals, in their present form, will give major developing country producers such as India, Pakistan and China vastly increased access to the U.S. market for textiles and apparel by phasing out U.S. import quotas and reducing U.S. tariffs. Simultaneously, other Uruguay Round proposals will weaken the United States' ability to combat foreign unfair trading practices and will limit U.S. sovereignty in dealing with a wide range of trade issues.

This paper examines both the NAFTA and the Uruguay Round from the perspective of the U.S. textile industry. It also assesses very recent developments regarding commitments by President Clinton to improve key Uruguay Round proposals by addressing concerns of the U.S. textile and apparel industry. Finally, the paper concludes with observations about the likely impact of the NAFTA and the Uruguay Round on the domestic textile industry.

NAFTA: A Boost For U.S. Textiles

Mexico is the United States' third largest trading partner, after Canada and Japan. The difference between Mexico and Japan, however, is quite stark: last year we had a \$5 billion trade surplus with Mexico and a \$49 billion deficit with Japan.

Analyzing just textile trade with Mexico, not including 807 (off-shore assembly of garments), some very interesting things emerge. Mexico is the U.S.'s twelfth-largest source of imported textile products but was its second largest customer for textile exports. U.S. textile companies exported almost as much textile mill production to Mexico as they did to all of Asia. Again, however, there is a rather striking difference in trade patterns between Mexico and Asia. Last year the U.S. rang up a \$3 billion deficit in textile trade with Asia; it had a surplus with Mexico. Here is a recent history of textile trade with Mexico:

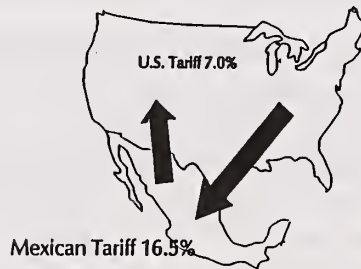
-Table 1-
U.S. TEXTILE TRADE WITH MEXICO
MILLION \$

	<u>1988</u>	<u>1989</u>	<u>1990</u>	<u>1991</u>	<u>1992</u>	<u>Year Ending June 1993</u>
<u>YARN</u>						
Exports	23	33	37	49	63	57
Imports	44	47	40	53	49	55
U.S. Balance	-21	-14	-3	-4	+14	+ 2
<u>FABRIC</u>						
Exports	274	262	345	351	469	513
Imports	22	26	49	60	54	63
U.S. Balance	+252	+236	+296	+291	+415	+450
<u>MADE-UP & MISC.</u>						
Exports	61	103	133	136	166	189
Imports	60	73	81	93	113	111
U.S. Balance	+1	+30	+52	+43	+53	+ 78
<u>TOTAL</u>						
Exports	358	398	515	536	698	759
Imports	126	146	170	206	217	230
U.S. Balance	+232	+252	+345	+330	+481	+529

In just four years' time, this industry's exports to Mexico have doubled -- to nearly \$700 million -- and our trade surplus has more than doubled to \$481 million. This year it will exceed \$500 million.

What is most intriguing about these data, however, is that this was done without any NAFTA in place and while Mexico's average import duty on goods from the U.S. is more than twice as high as the average tariff on goods we import from Mexico. NAFTA will eliminate those tariffs. It seems obvious that if a country agrees to eliminate a 16.5% tariff and the U.S. agrees to eliminate a 7% tariff, the U.S. will stand to gain.

-Figure 1-
Trade Weighted Average Non-Apparel Tariff



And as for the argument that Mexico cannot afford U.S. textiles, last year Mexico managed to afford \$700 million worth with a 16.5% tariff. How much can they afford with no tariff? Last year the U.S. exported \$13 million worth of bed linens to Mexico with a 20% tariff imposed on them. How much can U.S. sheet makers sell with no tariff? More than \$13 million, it seems safe to say.

To get some idea of how things will proceed under NAFTA, it may be useful to look at what has happened under our existing free trade agreement with Canada:

-Table 2-
U.S. TEXTILE TRADE WITH CANADA
MILLION \$

	<u>1988</u>	<u>1989</u>	<u>1990</u>	<u>1991</u>	<u>1992</u>	<u>Year Ending June 1993</u>
<u>YARN</u>						
Exports	126	115	159	173	201	211
Imports	50	53	66	94	121	126
U.S. Balance	+76	+62	+87	+76	+79	+ 85
<u>FABRIC</u>						
Exports	378	396	657	702	813	886
Imports	107	142	161	184	254	273
U.S. Balance	+271	+254	+496	+518	+559	+ 613
<u>MADE-UP & MISC.</u>						
Exports	134	154	349	458	436 ¹	443
Imports	55	76	86	90	94	104
U.S. Balance	+79	+78	+263	+368	+342	+339
<u>TOTAL</u>						
Exports	638	665	1165	1333	1451	1540
Imports	212	271	313	369	469	503
U.S. Balance	+426	+394	+852	+964	+982	+1037

¹Effect of carpet anti-dumping margin

From 1988, the year before the U.S./Canada Free Trade Agreement went into effect and both countries started to phase out import tariffs, to 1992, U.S. textile exports to Canada have grown 127% to almost \$1.5 billion. At the same time, Canada has increased its textile exports to the U.S. by 121%. Our textile trade surplus with Canada during the four short years of our Free Trade Agreement has increased from \$426 million to \$982 million. Today, the U.S. is selling to Canada a billion dollars' more worth of textiles than Canada is selling to the U.S. What is the bottom line, then, on the U.S./Canada Free Trade Agreement? As these data show, both countries have increased their exports significantly to each other. That is what was supposed to happen and that is indeed what has happened.

Now the question might reasonably be posed: "Can our success in Canada be duplicated in Mexico?" To try to answer this, consider the evidence immediately at hand:

- We have already had a 95% increase in textile exports to Mexico in four short years without NAFTA, and in spite of sizeable Mexican tariffs..
- The population of Mexico is 3½ times larger than the population of Canada. Over half the population is under the age of 25 and consumers between the age of 18 and 35 are the largest consumers of textiles per capita.
- Mexico's economy is growing much faster than Canada's and the United States'.
- In addition, the NAFTA-induced increase in wages, disposable income and living standards will make it possible for more Mexican consumers to buy more American sheets, towels, jeans, socks -- everything. Mexicans want American goods. For example, the El Paso, Texas Chamber of Commerce estimates that thirty percent of the retail sales in border communities like El Paso derives from Mexicans coming across the border to shop. Mexicans prefer U.S. goods but they are unable to get them as cheaply in Mexico. Under NAFTA they will be able to

Clearly, Mexican demand will increase for U.S. textile and apparel goods. Equally important are the rule of origin provisions in NAFTA that will require all textile components beginning at the yarn stage to be made in North America. U.S. textile products are already competitive in this region and will be in demand by makers of apparel and other finished products in all three NAFTA countries.

Special enforcement provisions in the agreement will act to prevent goods from moving illegally through a NAFTA country to take advantage of duty-free trade. These provisions include customs documents that require the importer to certify that the rule of origin has been met, give customs authorities the ability to audit declarations and production records and facilities in any NAFTA country and permit unannounced customs inspections of production facilities should any illegal activities be suspected.

Uruguay Round; A Threat to U.S. Textiles

The existing and potential benefits of NAFTA must be weighed against proposals in the Uruguay Round of GATT negotiations that could undermine those benefits. There is much in the GATT proposal contained in the so-called Dunkel draft that can harm the U.S. textile industry unless significant improvements are made. For example:

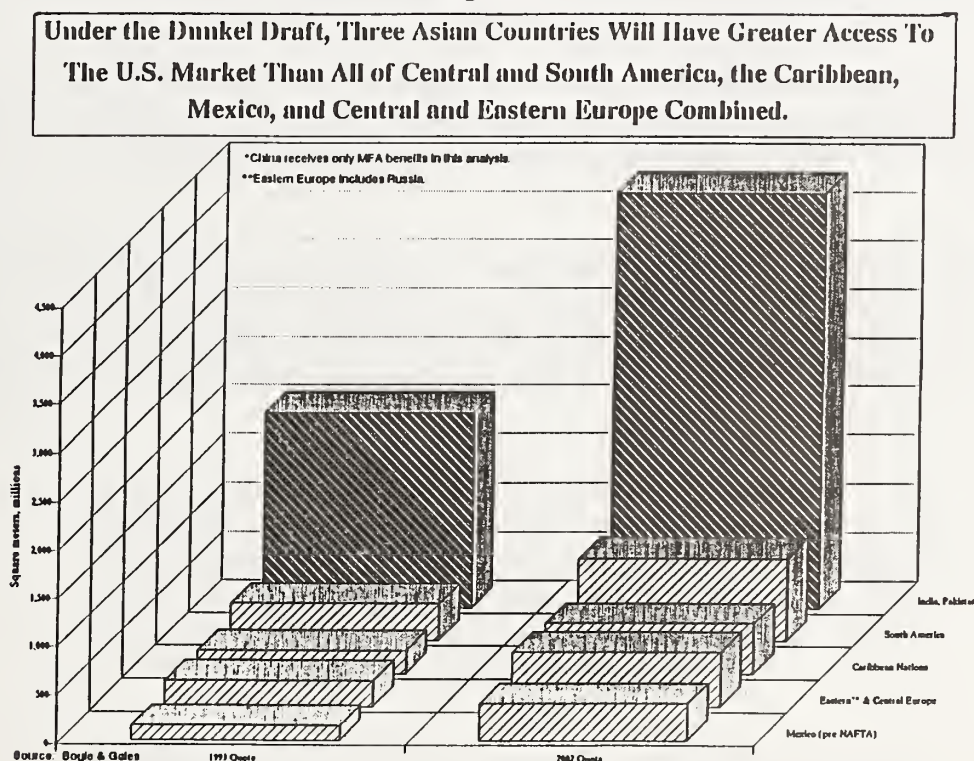
- The proposed antidumping provisions would seriously weaken existing U.S. anti-dumping laws and would make it more difficult for U.S. producers to attack illegal dumping by foreign suppliers.
- The countervailing duty provisions of the Dunkel draft will also limit the ability of U.S. producers to seek remedies against foreign subsidies.
- The Dunkel draft on intellectual property does not deal effectively with the protection of textile and apparel designs and models in spite of U.S. industry efforts to include such provisions.
- U.S. sovereignty will be challenged through the creation of a new trade body known as the Multilateral Trade Organization (MTO) which would have powers not intended by Congress with the result that, for example, any administrative or court decision involving U.S. trade could become subject to the approval of the MTO and/or an international tribunal process.

A more direct and greater threat to the U.S. textile industry is a proposal in the Dunkel draft that would phase out textile and apparel quotas as the Multifiber Arrangement (MFA) is eliminated. The MFA has provided a mechanism to control growth in imports through bilateral textile agreements between the U.S. and 40 countries. Even though import growth has exceeded U.S. market growth and imports' share of the market has increased, the MFA has prevented overwhelming surges which could cause rapid disinvestment and spiralling job losses.

The problem is that the Dunkel draft will permit imports to more than double during the ten-year phaseout period, causing enormous damage to U.S. textile and apparel production and employment. Three separate studies² have concluded that the Dunkel draft proposal would lead to over a million U.S. textile and apparel job losses during the phaseout period. Further losses will result after the phaseout.

Another unacceptable feature of the phaseout proposal is that it rewards those countries already holding huge quotas and punishes others -- including not only U.S. workers and producers but those in Mexico and smaller developing countries such as in the Caribbean. Figure 2 shows that under the Dunkel draft, quota growth provided India, Pakistan and China (even if China gets only MFA growth as a non-GATT member) will overwhelm the quota access provided for Mexico, the Caribbean, South America and Eastern Europe.

-Figure 2-



² The Impact Of Eliminating The Multi-Fiber Arrangement On The U.S. Economy: Isolating The Textile And Apparel Components of GATT, The WEFA Group, January 1992; Analysis Of The Domestic Employment Effects Of The Removal Of U.S. Textile And Apparel Import Quotas By 2002, Graef, P. and Reilly, J., September 1990; Phasing Out The Multifiber Arrangement In The Uruguay Round: The Impact On U.S. And Foreign Producers, ATMI, March 1992.

ATMI has sought vitally needed improvements in those Dunkel draft provisions having a direct impact on textiles. These improvements are the minimum needed to lessen the damage to our industry and its workers and to give the benefits of NAFTA a chance to develop.

It is at this point that the NAFTA and the Uruguay Round are so inter-related for our industry. What NAFTA provideth, the Uruguay Round taketh away.

Can the Damage Be Avoided?

President Clinton committed just prior to the NAFTA vote to improve the Dunkel draft textile provisions in a letter to Congressman John Spratt (D-SC), chairman of the Congressional Textile Caucus and several other textile state Representatives. Those improvements address the key concerns raised by the U.S. textile industry, but only two weeks remain between the date of this conference and the December 15 deadline for the Uruguay Round talks.

The President acknowledged the problems caused by the U.S. textile and apparel industries having to undergo MFA quota phaseout and substantial tariff cuts simultaneously. He made the following commitments regarding textiles and apparel in the Uruguay Round trade negotiations:

- Effective market access commitments must be made by all Uruguay Round participants as reciprocity for U.S. agreement to the MFA phaseout and to fulfill the Uruguay Round commitment that all participants would bring all trade measures under GATT disciplines.
- U.S. willingness to phase out the MFA will be linked directly to the achievement of effective market access in individual countries by requiring all countries to remove nontariff barriers and lower and bind tariffs at levels no higher than: 7.5 percent for manmade fibers, 15 percent for yarns, 30 percent for fabrics and made-up products and 35 percent for apparel.
- The People's Republic of China would not get the benefits of MFA quota phaseout unless and until it becomes a full member of the GATT and agrees to open its markets to imported textiles and apparel.

- U.S. Trade Representative Mickey Kantor will explore a 15-year MFA phaseout with countries which have indicated support and, if such support exists, the U.S. will propose and work to achieve it instead of the current 10-year plan.
- Tariff cuts for textiles and apparel will be phased in over a longer period than many other Uruguay Round tariff reductions and will be at least as long as the phaseout of the MFA.
- Sensitive textile and apparel products will not be integrated into the GATT system until the end of the quota phaseout period.
- The Administration will work with U.S. interests to achieve an outcome regarding tariffs on wool textile and apparel products that will be based on common positions reached by the U.S. and EC industries. In any case, the Administration would not anticipate going substantially beyond its current proposals for tariff cuts on sensitive products.

Assessing the Impact

The U.S. textile industry is the largest and most reliable customer for U.S. cotton growers, having consumed over 10 million bales of U.S. cotton last year. The NAFTA and the Uruguay Round will have opposing impacts on U.S. cotton consumption, but it is not possible to estimate with any precision how cotton consumption will be affected. It is safe to say that:

- Under NAFTA, U.S. textile production will increase as Mexican duties are reduced and eliminated and this will increase the U.S. demand for raw cotton. It is important to note that the three largest end use consumers of U.S. cotton -- terrycloth towels, denim fabric and t-shirts -- are immediately duty-free when NAFTA goes into effect.
- The Mexican apparel market will be especially good for U.S. products such as blue jeans, sportswear, hosiery and underwear.
- The Mexican market will also be good for U.S. home furnishings -- for example, sheets, towels, blankets, drapery, carpets -- and for U.S. industrial textiles such as filtration, fabrics, geotextiles, printers' blankets, all transportation textiles and a host of others.

- The Uruguay Round proposals in the current Dunkel draft will result in rapid import growth in the many textile and apparel products now under quota.
- The major suppliers of the increased imports will be India, Pakistan and China -- non-market countries which export without regard to fair trade rules. They will take away U.S. market share from U.S., Mexican and smaller developing country producers.
- If the Dunkel draft can be improved by incorporating the changes committed to by President Clinton and benefits of the Uruguay round denied to China until it joins the GATT and opens its market, damage to the U.S. industry and its workers will be lessened and the growth opportunities provided by the NAFTA can be realized.

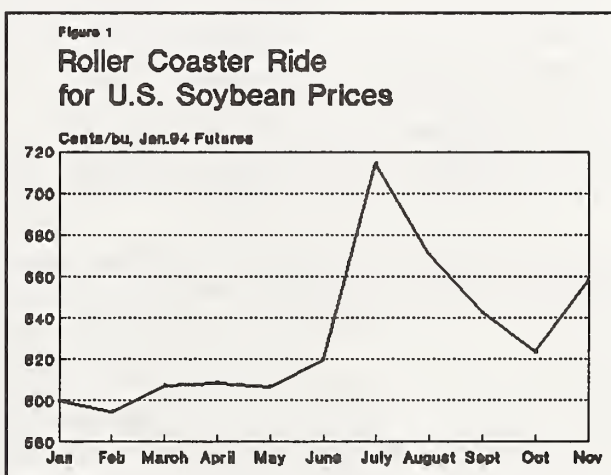
Outlook '94

For Release: Wednesday, December 1, 1993

THE OUTLOOK FOR THE OILSEEDS INDUSTRY: FORECASTING IS NEVER EASY....

Nancy Morgan and George Douvelis
Agricultural Economists
Economic Research Service

1993 was a roller coaster year for the U.S. soybean industry (figure 1). We cannot help but give a sigh of relief as farmers finally put the crop into the bins. In the oilseed outlook speech last year, the soybean outlook for 1993/94 was portrayed as similar to 1992/93, with slightly lower production because of lower yields. Well, yields were indeed lower this year and the growing season could hardly have been worse--floods in the midwest and drought in the southeast. Weather, obviously, makes a liar out of the best analyst. Even so, I can with a certain degree of confidence predict that 1994/95 will not be similar to 1993/94.



Today I will present the outlook for oilseeds. I will focus on soybeans and touch briefly on the prospects for minor oilseeds. Although domestically for 1993/94 the major supply uncertainties are over, questions continue to cloud the outlook for the global oilseed market: the Blair House agreement, implementation of NAFTA, tightness of Russian credit, and the outlook for South American oilseed production.

The 1993/94 Story: Floods and Drought

The 1993 U.S. soybean production is now estimated at 1,834 million bushels, the smallest crop since 1988. This crop was produced on an estimated 56 million acres, the smallest area harvested in 17 years (figure 2). Yields have suffered---although, some states like Illinois and Indiana had higher yields than in 1992. The national average yield should be 32.7 bushels/acre, which is below trend and 13 percent lower than 1992's record.

Carryin stocks for 1993/94 were 292 million bushels, 14 million higher than the 1992/93 stocks but still about 12 weeks of domestic crush or about 24 weeks of exports. The carryover stocks for 1993/94 are estimated at about 170 million bushels, the lowest since 1977/78.

While estimated supplies will be nearly 14 percent lower than the record supplies of 1992/93, the demand for soybeans will also experience its own decline. Crush is expected to drop to 1,225 million bushels in 1993/94, 54 million bushels below the record 1992/93 crush. Crushing margins, while adequate, are not likely to remain at the very favorable levels of last season. Exports of soybeans are forecast to decline substantially from the 770 million bushels of 1992/93 to only 625 million bushels.

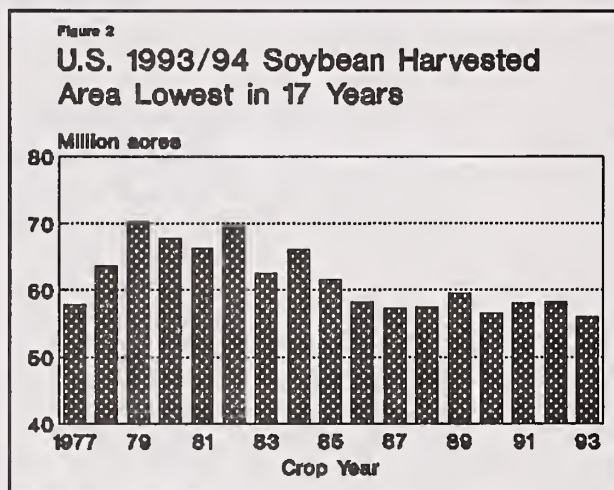
Weak European soybean import demand and record-large crops in Brazil, Argentina and India pressure U.S. exports.

Domestic soybean meal demand this year will likely be unchanged from 1992/93 (24.0 vs. 24.16 million tons). The forecast increases in broiler and turkey production (5 percent and 2 percent, respectively), are expected to offset the smaller inventory of hogs and pigs and hold soybean meal feeding near last year's levels. Poultry and other feed operations may be affected slightly by some crop quality problems which may limit the availabilities of 48 percent soybean meal relative to 44 percent, adding to high-protein meal price premiums in 1993/94. Projected soybean meal exports are off by more than 19 percent from 1992/93 to 5.1 million short tons, basically due to changes in the European Community's (EC) Common Agricultural Policy (CAP), limited import demand from the Former Soviet Union, and higher supplies from South American crushers. I will elaborate on these issues later on.

Despite the expected rebound in 1993/94 of soybean oil yields, production of soybean oil is likely to decline, mirroring crushings. Production is expected to drop to 13,720 million pounds. Exports of soybean oil are expected to be off by 150 million pounds from last year to 1,350 million due to reduced U.S. availabilities and higher prices along with larger foreign production of soybean and palm oil. Domestic use is expected to shrink slightly to 12.9 billion pounds, while an abundant Canadian oilseed crop will encourage more imports of canola and soybean oil this year than last.

Based on the above forecasts of supply and demand, our forecasts for prices for 1993/94 are (1992/93 in parentheses):

- i) bean prices in the range of \$6.00 to \$7.00 per bushel (\$5.60).



- ii) oil prices is the range of 23 to 27 cents per pound (21.40)
- iii) meal prices in the range of \$190 to \$220 per ton (\$193.75).

Table 1: U.S. Soybean Supply and Use for 1993/94 and 1994/95

ITEM	1993-94	1994-95
Acreage (mil. ac.)		
Planted	59.5	60-61
Harvested	56.0	58.9-59.9
Yield/Harv. Ac.(bu)	32.7	35.5
Supply (mil. bu.)		
Beginning Stocks, Sept 1	292	170
Production	1,834	2,091-2,125
Imports	5	5
TOTAL SUPPLY	2,131	2,266-2,301
Disposition (mil. bu.)		
Domestic	1,336	1,355-1,375
Exports	625	650-660
TOTAL DISPOSITION	1,961	2,005-2,035
TOTAL ENDING STOCKS	170	250-280
Season Average Price (\$bu)	\$6.00-7.00	\$5.30-6.30

1993/94: Could Be A Very Bad Year for U.S. Oilseed Exports

U.S. oilseed and product exports in 1993/94 are not only faced by stronger competition from our traditional competitors in the soybean market, ie., South America, but also a slight recovery from last year's low world production of other oilseeds, particularly rapeseed and sunflowerseed. And, in the vegetable oil market, palm oil is experiencing an export surge as relatively high oil prices fuel import demand for the cheaper palm oil.

While demand uncertainties traditionally plague the oilseed market at this time of year, this year is unusual as the world tries to anticipate feed compounders' responses in the E.C. to the realignment of grain prices that accompanied the implementation of CAP reform in 1993/94. With the EC accounting for approximately half of all oilseed imports, switches in consumption patterns affect world prices and U.S. exports of soybeans and meal.

More predictable is the slowness of buying by the FSU as credit problems have restricted imports of both meal and beans. While the U.S. continues to supply some credit, much of the FSU imports may have to be made on barter or other arrangements. To date, 1993/94 U.S. meal exports are at levels similar to last year. Unless additional credit arrangements are made, U.S. exports to

the FSU will be limited to between 600,000 and 900,000 tons, significantly below the 2.2 million tons of soybean meal exported in 1991/92.

U.S. soybean and meal exports in 1993/94 are forecast to plummet to a three year low of 17 million and 4.6 million tons, respectively. However, higher world prices are expected to maintain U.S. oilseed export values at only slightly less than last year's high of \$7 billion.

Looking Ahead One Year

As you know, USDA will not issue 1994/95 projections until next May and July. While major questions still remain about the outlook for the rest of 1993/94, based on information to-date, we can sketch out a preliminary 1994/95 scenario for the soybean complex.

The most significant imprint left by the floods of 1993 will be the high price of soybeans. Higher prices, coupled with a lower ARP for corn, should move more acres into soybeans in 1994. Present conditions suggest that U.S. planted acres for 1994/95 could range between 60-61 million acres. Assuming trend yields at the regional level and aggregating to the national average suggests a yield for 1994/95 of 35.5 bushels per acre. Acreage and yields of these magnitudes could push production to between 2.091-2.125 billion bushels.

Supply and demand conditions in the meal and oil markets imply a slight rebound in demand for crush. This would be up modestly from 1993/94, with part of the larger crop used to restore stocks to a more comfortable level of 255 to 285 million bushels, up sharply from 1993/94.

U.S. exports of soybeans are expected to show a small rebound-- although Brazil, Argentina and India, in the absence of crop yield problems, will likely have larger supplies available for export. Weakness should persist in European soybean meal consumption and import demand in response to lower relative grain prices under the Community's CAP reform. Additionally, weak import demand in the FSU is likely to continue into 1994/95. Nevertheless, strengthening demand in other countries, particularly in Asian markets and Mexico, will likely be enough to allow small U.S. export gains in 1994/95, particularly if prices are somewhat lower.

The combination of a larger crop and a weak recovery of demand is likely to mean growing stocks and some downward pressure on soybean prices. In this scenario, the season average price is expected to drop to about a range of \$5.30 and \$6.30 per bushel compared to \$6.00 to \$7.00 in 1993/94.

U.S. soybean meal consumption is postulated to increase slightly and set a new record at approximately 24.5 million tons in 1994/95. This is due mostly to anticipated growth in the production of broilers and turkeys.

Soybean meal exports in 1994/95 are projected to show not much of a recovery from 1993/94 low levels as the European Community's demand continues to weaken. E.C. feed compounders should again substitute more domestically

produced cereals for imported meal. FSU meal imports are expected to lag also, unless their debt situation improves and financial credit is again available.

This combination of weak export demand, only a small increase in domestic use, and the prospects of larger supplies of competitive protein feeds is expected to apply downward pressure on U.S. soybean meal prices. Soybean meal prices are expected to range between \$160 and \$190 per ton, an almost 15 percent reduction from the 1993/94 level.

Unlike soybeans and soybean meal, oil prices may rise in 1994/95. While the production of soybean oil is estimated to increase modestly, up 1 to 3 percent from 1993/94 production, total supplies of oil in 1994/95 are expected to be lower because of sharply lower carryin.

Exports of soybean oil are expected to drop modestly in 1994/95. U.S. supplies are expected to remain tight and strong palm oil supplies in Malaysia and Indonesia will continue to challenge other vegetable oils exporters in developing countries and other Asian markets.

Domestic disappearance is estimated to increase modestly, up around 100 million pounds from 12.9 billion pounds in 1993/94. Despite the lower projected exports of soybean oil, the much lower stocks of 1994/95 as well as the increased domestic demand, are expected to strengthen oil prices. The season price of soybean oil is expected to range between 23 and 27 cents per pound.

1994/95 Trade Prospects for Soybeans and Products

The U.S. soybean and product export outlook in 1994/95 and beyond hinges critically on a number of policy issues. At present, many policy issues, such as the NAFTA agreement, implementation of the EC oilseed agreement contained in the Blair House agreement, a GATT agreement and FSU credit, could have impacts that are felt in the 1994/95 marketing year.

Assuming a return to more normal weather conditions and the implementation of the Blair house agreement concerning oilseeds, prospects for the world oilseed complex in 1994/95 are for an increase in world oilseed production. 1993/94 was the first year since 1988 that world oilseed production was not a record. Higher soybean production in 1994/95 as the U.S. returns to more normal production patterns, and world sunflowerseed production increases are expected to drive the overall increase.

Despite stronger competition, U.S. soybean and meal exports are expected to increase only slightly over 1993/94's low levels as production levels rebound from this year's low. U.S. exports will also be helped by stronger macroeconomic growth, especially in Asia, which will buoy demand for vegetable oil and meal. Furthermore, U.S. oilseed export prospects in these rapidly growing markets of the SouthEast Asian countries of Malaysia, Indonesia, and Thailand will continue to be enhanced due to reduced bean and meal exports from China.

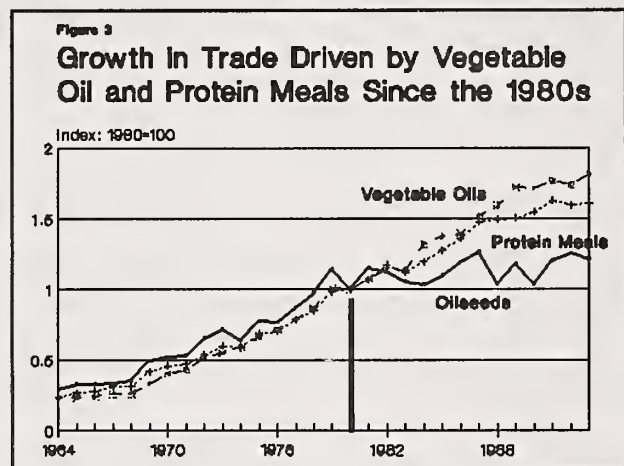
While our South American competitors, Brazil and Argentina, are likely to maintain relatively high levels of production, it is unlikely that area and production will expand much more, unless prices reach the high levels of the 1970s. Despite higher soybean production in China, China's exports will remain constrained by strong income growth in China which has fuelled increased demand for meat and consequently protein meals.

Underlying these projections are the highly uncertain implications of a NAFTA agreement, the effects of CAP reform and the Blair House accord, and a resolution of the GATT. The difficulty in assessing these policy issues is that confusion in both the direction and magnitude of the effects results in an extremely cloudy outlook for the U.S. oilseed sector in both 1994/95 and beyond.

Let's look at each of the issues separately and the overall outlook for soybean and products exports in the 1990s within a context of world oilseed trading trends in the 1970s and 1980s.

Trends in Oilseeds and Product Consumption and Trading

A review of past trends in oilseeds and products consumption and trade reveal a discernible pattern favoring the consumption and trade of vegetable oils as opposed to protein meals and seeds. (figure 3). This can be explained in part by the rapid growth in production of the higher oil yielding oilseeds such as rapeseed, sunflowerseed, and palm oil. The strong production growth of these oilseeds was induced in many countries by domestic oilseed policies focused on increasing vegetable oil self-sufficiency. The consequences of these policies were increased vegetable oil supplies, lower prices, and stronger global consumption and trade.



Within the context of these trends, let's discuss some of the issues that have the potential to fundamentally change the global oilseed complex and the outlook for U.S. soybean and product exports.

Impact on the outlook for oilseeds and products due to CAP reform and the Blair House agreement on oilseeds

Critical to the outlook for the world oilseed complex is the changing protein meal demand in the EC as a result of CAP reform. Analysts' estimates of the impact of reform on EC protein meal consumption range from a slight increase to a decline by over 6 million tons by the end of the century. While these

estimates vary dramatically in magnitude and time frame, they all point in the same direction--lower EC protein meal consumption.

Under the new oilseeds policy in the EC, producer prices for oilseeds dropped by about 50 percent. This drop, combined with the general CAP set-aside provisions, resulted in a 10-percent drop in oilseed production in 1993/94. This drop should be maintained by the Blair House agreement of November 29, 1992 which has since been ratified by all EC Member countries. This agreement limits payments on oilseed area for food purposes to 5.499 million hectares (12.5 million acres) in 1994/95 and 5.128 million hectares (11.6 million acres) in 1995/96. The result should be lower EC oilseed area and hopefully production, depending on the policy effects on oilseed yields.

However, lower cereal prices in the E.C. will undoubtedly increase the proportion of cereals used in feed rations. So despite the drop in EC oilseed area and production, soybean meal consumption may initially drop over 1 million tons in 1993/94, followed by a continued but slighter decline in 1994/95. In the out years, however, strong growth in the poultry and pork industries may result in a slight recovery in overall meal consumption.

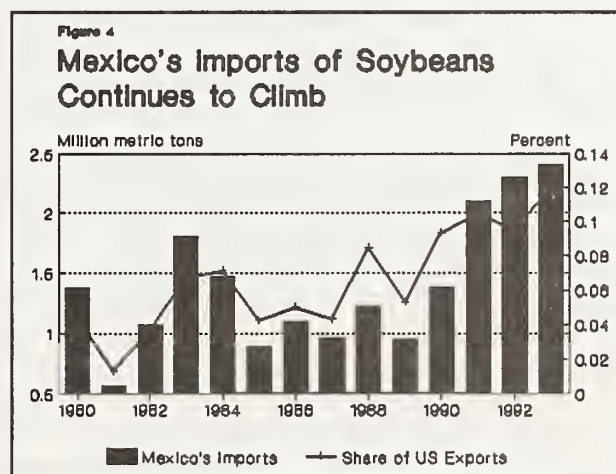
NAFTA: Bodes Well for U.S. Soybean Exports

Mexico, with soybean imports more than doubling since 1989 (figure 4), is one of the fastest growing markets for U.S. oilseeds and products. Much of this growth is driven by a more favorable macroeconomic environment which has strengthened demand for meat products, and consequently protein meal. For oilseeds and products, the effects of the stronger economic growth resulting from already implemented unilateral internal economic reforms outweigh the effects of tariff reduction envisioned under NAFTA. Present Mexican tariffs on oilseeds and

products are limited to a seasonal import duty of 15 percent on soybeans (in effect from August 1 through January 31st) and a 15 percent and 10 percent tariff on soybean meal and oil, respectively. Reductions, and eventual elimination, of these tariffs will have only a small effect on Mexican oilseed imports. Rather, the tariff-related impacts on import demand will stem from cross-commodity linkages that favor increased meal usage.

The Longer Term Fundamentals for Oilseeds

We believe that the fundamentals point to rising world demand for oilseeds by the mid-to-late 1990s. Economic recovery will strengthen demand in Eastern Europe while the economies of the FSU Republics stabilize and then begin



growing towards the end of the decade. Repercussions from changing EC feeding rations will stabilize while many of the developing countries now hurt by excessive debt will attain stronger economic growth. This favorable global macroeconomic outlook will stimulate oilseed and product demand.

The trends of higher demand for imports of protein meals and vegetable oils are expected to continue to erode trade in oilseeds. Much of the growth in oilseed and product demand in the 1990s and beyond is expected in lower income countries who will continue to have inadequate crushing facilities. These countries will opt for importing the products rather than seeds and in the case of oil, low priced palm oil will be preferred to other oils.

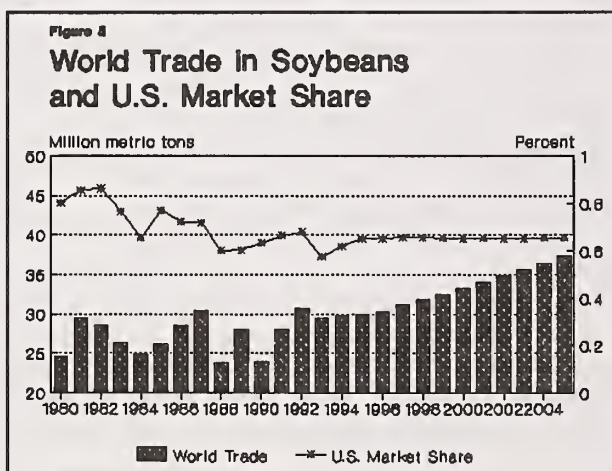
How Might Soybeans and Products Fare?

A look at the longer term outlook for trade in soybeans and meal reveals that world trade in soybeans is forecast to increase at a 2.1 percent annual growth rate over the next ten years, faster than in the 1980s. This compares to stagnating bean exports in the 1980s.

Foreign meal consumption is expected to expand over the next ten years with average annual growth projected at 2.8 percent, marginally higher than the growth experienced during the 1980s. This growth rate compares favorably with the much slower projected population growth, forecast at 1.5 percent over the same period. Projections of very slow GDP growth in Eastern Europe and the FSU are constraining the consumption outlook through the mid 1990s. This is accentuated by the falling meal consumption in the E.C.

However, the import mix in the EC will favor beans over meal in the medium term in an effort to maintain domestic oil supplies. This will buoy world soybean import demand in the near term. The U.S. market share for soybeans is expected to rise from 60 percent in 1993 to 65 percent over the next decade (figure 5).

While world meal consumption is projected to experience a slightly higher growth rate during the projection period, most of the growth will occur in the latter part of the decade. Consequently, the U.S. market share for meal exports is expected to drop in the near term. Declines in import demand from



the EC and the FSU over the next few years will result in the U.S. meal export market share not showing much growth over the 16 percent share in 1993/94. It is only later that the U.S. level will return to the more normal range of 19-20 percent (figure 6). Much of the growth in import demand will stem from Asian markets or developing countries.

What Does This Mean For the Longer Term Outlook for U.S. Exports?

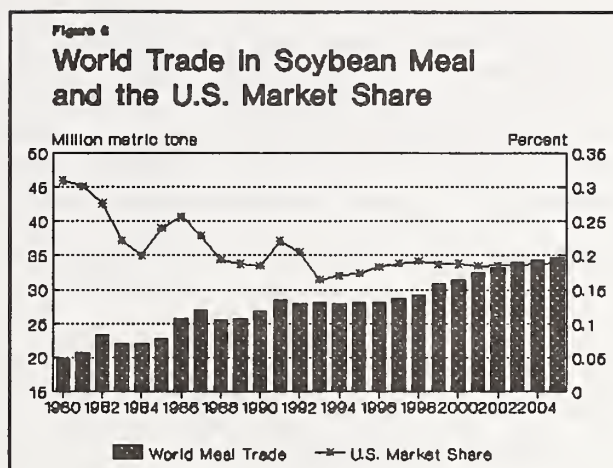
The U.S. is the world's major oilseed producer accounting for an average of 28 percent of world production, 50 percent of world trade in oilseeds, and 20 percent of world protein meal consumption. Our oilseed industry is dominated by soybeans, although we are also a leading producer of cottonseed and peanuts. While U.S. soybean exports account for 70 percent of the world market, soybean meal exports account for only about 20 percent of world trade and soybean oil exports 15 percent.

We believe the U.S. will continue to maintain a dominant role in the global oilseed market for the rest of 90's for the following reasons:

- a) Widespread deregulation of markets by many countries, especially developing countries, along with more prudent macroeconomic policies and debt management will foster growth, buoying import demand;
- b) Passage of multilateral and regional trade agreements, such as GATT and NAFTA, will accelerate economic growth and reduce trade barriers.
- c) The U.S.'s strong infrastructure and excess productive capacity is well positioned to take advantage of expanded demand. U.S. acreage idled under the 10 year Conservation Reserve contracts will become available starting in 1996. Of the nearly 40 million acres idled in this program a substantial portion could be returned to cropping if needed. Indeed, several million acres could return to soybean production if the demand is there, and;
- d) Supply expansion opportunities in other countries such as Argentina will be constrained by limited area and productivity gains, thus helping the U.S. maintain a strong market share in an expanding global economy.

A GATT Agreement--Changes in the Outlook?

The million dollar question for the U.S. oilseed industry is whether historical world trends favoring product exports over oilseeds will continue or even escalate under a GATT agreement. In general, a GATT agreement would have more of an impact on trade and prices for other commodities, such as wheat or corn, that face more trade barriers in world markets than do oilseeds and products.



Most of the present trade barriers facing the oilseed complex hinder trade in the products--meals and particularly vegetable oils--more than the seed. Consequently, a reduction in trade barriers, whether they be in the form of tariffs or non-trade barriers--such as quotas or state trading--would result in lower domestic prices for the products in many countries, increased import demand and higher prices in world markets. Reduced barriers for oils, combined with the income growth postulated under an agreement, should result in stronger demand for oils than for protein meals. With much of the demand growth stemming from developing markets, particularly in Asia, lower priced palm oil would be a major beneficiary along with high oil content oilseeds.

In summary, the trends of the 1980s which favored trade in products over beans are likely to not only continue into the 1990s but even escalate under a GATT agreement. However, while U.S. oilseed exports stagnated during the 1980s, the trends envisioned for the 1990s could have a silver lining for U.S. exports, particularly beans. Higher products prices will engender stronger crushing margins and those regions capable of expanding crushing may do so, thereby strengthening demand for U.S. soybeans. Additionally, a continuation of liberalizing meat product markets mandated under the GATT provisions could stimulate demand for U.S. livestock products, thus generating additional domestic demand for crushing.

The Outlook for Minor Oilseeds

Sunflowerseed: The 1993/94 Marketing Year

When it comes to minor oilseeds, the 1993/94 marketing year can easily be called the year of the sunflower. Acreage is up almost one-third from a year ago and production rose an impressive 28 percent to 3.34 billion pounds. The larger supplies of 1993/94 are welcome as beginning stocks were drawn down to uncomfortably low levels (147 million pounds). Ending stocks of all types of sunflowers are expected to reach 220 million pounds, although higher than 1992/93, they are still tight by historic standards.

The 1993/94 U.S. sunflower crop is expected to encounter increased demand driven by anticipated growth in crush, seed exports and non-oil use. The growth in demand for sunflowers is expected to more than offset the larger supplies, resulting in higher prices for sunflowerseed and its products. The season average price for 1993/94 is projected to average \$11.30 to \$12.30 per hundred weight. As the domestic market for sunflower oil gains momentum, oil prices are expected to range between 26 to 30 cents per pound. The season average price for sunflower meal is expected to range between \$97 to \$117 per ton (figure 7).

The Outlook for Peanuts for 1993/94

Unlike the soybean crop, excessive moisture was not the problem for the peanut crop in the 1993/94 season. The peanut crop in the Southeast was hit particularly hard by dry conditions. The lack of rain during June and July is the main reason for the 24 percent reduction in production for 1993/94.

Production is estimated at 3.253 billion pounds, while beginning stocks are at 1.350 billion for 1993/94 making total supplies 14 percent lower from last year at 4.6 billion pounds.

The smaller supplies of the peanut crop are expected to encounter reduced demand in 1993/94. Total demand is expected to decline by 211 million pounds in 1993/94 to 3.780 billion pounds. All the major components of the demand are expected to decline in 1993/94:

- i) food use at 2.075 billion pounds, down 47 million pounds from 1992/93
- ii) crush at 729 million pounds, down 162 million and
- iii) exports 231 million pounds lower than 1992/93 at 720 million.

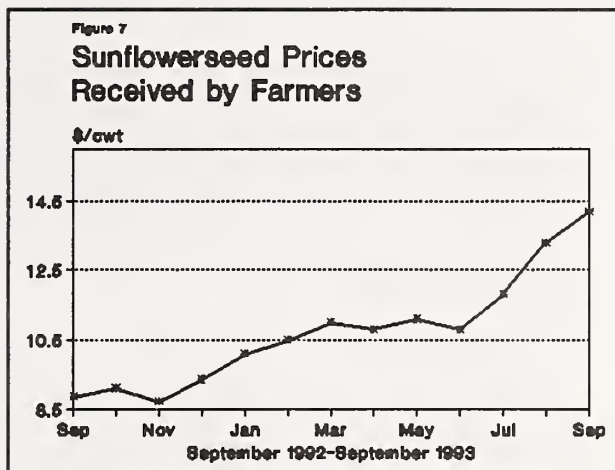
The principle cause of the lower food use has been weak offtake of peanuts for peanut butter production, the most important component of the food use. Total peanut offtake for peanut butter production fell in 1992/93 by 10 percent. It is quite unlikely that this trend will reverse itself in the near future. Most of the imports (around 80 percent) came from Canada, a country that does not produce peanuts, while the rest came from Argentina and China, 18 and 1 percent respectively. Peanut butter imports can increase as much as the market forces of supply and demand dictate, unlike imports of raw peanuts which are controlled under Section 22 of the Agricultural Adjustment Act of 1933.

The Cottonseed Outlook for 1993/94

The U.S. cottonseed crop for 1993/94 is estimated at 6.327 million short tons, up 97,000 short tons from last season. The increased production is mainly due to increased acres and production of cotton for lint of which cottonseed is a by-product. The fact that cottonseed is a by-product sometimes complicates and distorts the supply and demand dynamics for the cottonseed and products markets.

The larger supplies of cottonseed in 1993/94 are expected to face an increased demand. Higher projected corn and soybean meal prices for 1993/94 make cottonseed very competitive in the dairy feed market. In addition weather-related production problems have reduced the quality of dairy hay in many parts of the country providing another incentive to substitute cottonseed for feeding.

In 1993/94 crush is expected to increase by 121,000 short tons to 3.75 million tons, while feed use is estimated to reach 2.519 million tons up 15,000 short tons from last season.



1994/95: Again The Year of the Sunflower...?

The higher prices for sunflowerseed generated in 1993/94 should have a large impact in 1994/95. Farmers in the three dominant sunflower producing states-- North Dakota, Minnesota, and South Dakota--are expected to increase their acreage to between 2.9 and 3.1 million acres in 1994/95. The prospective increase in acres is reinforced by a continuing effort to develop high oleic sunflowers for mass production. High-oleic sunflowers are able to produce sunflower oil with 4 percent saturated fat, which is lower than canola oil with 6 percent.

Assuming regional trend yields, 1994/95 production could reach between 3.6 - 3.8 billion pounds. Tightening global markets for vegetable oils and higher sunflowerseed oil prices encouraging strong crush demand will mean strong demand for sunflowerseeds. Demand for confectionery sunflowerseed is also expected to grow modestly. A breakthrough in the development of high-oleic sunflowers would add strength to sunflower oil demand prospects, while confection seed export prospects may be enhanced by new markets in Spain and the Middle East.

The larger supplies of 1994/95, as well as the recovery of the stocks, are expected to have a negative impact on prices of sunflowerseed and its products. In this scenario, the U.S. seed price is expected to average \$10.75 to \$12.75 per hundredweight while the price of sunflower oil is expected to range from 25 to 31 cents per pound as competition with other vegetable oils mounts.

Table 2: U.S. Supply and Demand for Sunflowerseeds

Item	1993-94	1994-95
SUNFLOWER SEED		
Area (1,000 ACRES)		
Planted	2,821	2,900-3,100
Harvested	2,740	2,810-3,010
Yield (lbs./acre)	1,218	1,273
Supply (Million lbs.)		
Beginning Stocks, Sept. 1	147	220
Production	3,336	3,600-3,800
Imports	105	105
TOTAL SUPPLY	3,588	3,925-4,125
Disposition		
Crush	2,110	2,050-2,150
Other	972	1,008-1,028
Exports	286	400-450
TOTAL DEMAND	3,368	3,458-3,628
Ending Stocks, Aug. 31	220	467-497
Season Ave. Price (\$/cwt)	\$11.30-\$12.30	\$10.75-\$11.75

An Economist's Caveat on Commodity Projections

Weather, government policies, international trade agreements, changing macroeconomic environments, etc. will obviously change the outlook for any commodity. While USDA's commodity projections incorporate information from different econometric models with analyst's expert judgements, they are still just projections and numbers always change as more information is obtained.

While the analyst last year was made a liar by the weather, analysts can in general be optimist with the odds over the long term. With numbers changing all the time, an analyst can hope to be right at least once. Looking at the outlook for the 1994/95 outlook for the U.S. soybean complex, the market fundamentals indicate room for optimism. Higher soybean prices and a lower ARP for corn should move more area into soybeans. While import demand for both beans and meal is expected to remain constrained, stronger domestic meal demand should outweigh the effect of potentially higher oil prices to stimulate demand for crush.

Outlook '94

For Release: December 1, 1993

**FIVE CHALLENGES FOR SOYBEAN GROWERS
IN THE 1995 FARM BILL****Sara Wyant
Editor
Agri-Pulse Communications, Inc.**

Trying to predict the 1995 Farm Bill in 1993 could put me in the same category as some of the weather forecasters who predicted a normal growing season in the Midwest this year! However, it's important to note that the parameters of this debate are already taking shape. Several state and national farm organizations have appointed farm bill task forces and are trying to develop future policy options. In recent weeks, we've been putting together a preview of the 1995 Farm Bill for our readers which is based on numerous discussions with Congressmen, staff members, farm organization leaders, industry representatives and members of the environmental community. Today, I'd like to share with you some of the key issues that will affect soybean growers.

#1. Serving More Than One Master

When I first started Agri-Pulse Communications in 1985, I can remember talking to soybean growers about the tremendous problems they have had in reaching consensus on new policies. Primarily, this is because we have two distinct types of people who raise soybeans:

- Those who grow soybeans because they want to make a profit and/or rotate from another crop.
- Those who grow soybeans because they want to make a profit, but do not have other, more profitable alternatives. In most cases, these growers have significantly lower yields than the first group.

In fact, when I asked some southern soybean leaders what policy changes they'd like to see in the 1995 Farm Bill, the most common answer was: "It depends on what happens with the cotton and rice programs." In the Midwest, the corn program is sometimes the key influence.

Adding to the confusion is the fact that soybeans are sometimes viewed as the forgotten child of U.S. farm policy. Part of this is by design, as soybean growers have tried to avoid set-asides and some of the other strings attached to the major farm programs. But in staying out of the farm program "kitchen," soybean growers have sometimes gotten the crumbs, in comparison to the meat and potatoes passed on to the favorite sons and daughters.

That's not to say that one commodity should be favored or that policies acceptable in one region are any better than the other. However, when it comes to developing new soybean policy, these two soybean growing factions bring distinctly different views to the farm policy table. And in search of a solution, they sometimes both get crosswise with other commodity groups.

This creates a real double-edged sword for soybean lobbyists. Success with one sector of the oilseed industry can cause you to be knifed by the other. Nonetheless, it hasn't stopped groups like the American Soybean Association from trying.

In preparation of the 1990 Farm Bill, the American Soybean Association launched a full blown, nationwide effort to solicit comments from soybean growers. It was one of the most well-prepared, comprehensive attempts to forge new policy that I have ever witnessed. While there was a tremendous amount of diversity, one of the issues that ranked highest on their score cards was higher loan rates. As a result, ASA developed a program known as the graduated equity loan or GEL.

However, in pursuit of some form of higher loan rate, ASA ran smack dab into the 1990 budget debate. They were successful in obtaining marketing loan provisions, but had some real trouble when it came to setting the loan rate. "Want something more?" Committee leaders asked. "Fine, but you must be willing to give something up as a way to share in the burdens being imposed on all commodities." The end result: that troublesome two percent loan origination fee that has made the program basically unworkable.

Instead of moving forward with new domestic policies over the last two years, it was all the American Soybean Association could do to finally get rid of that fee. Their new lobbying team was able to undue the damage by convincing Congress to drop the loan down to the same "effective" loan rate, \$4.92/bu., and establish a fiscal year restraint. Once again, the loan will be workable.

#2. The Continuing Budget Battle

Concern over the federal budget will undoubtedly intensify in coming years. In fact, many people believe that, if farm programs aren't cut again this coming year--either by the agriculture or appropriations committees, there will likely be pressure to make across-the-board cuts along with the 1995 Farm Bill. This continuing pressure to cut, cut, cut will make the 1995 Farm Bill debate far more complex for a couple of reasons.

First of all, in search of a better farm policy, we must consider not only how much a program cost, but how it will be scored against the baseline by the Congressional Budget Office and the Office of Management and Budget. This entire process reminds me of a T-shirt my favorite economics professor used to wear that said; "Economics: Common sense made difficult."

Therefore, it will be almost impossible to walk down a policy path--no matter how well-intentioned---that will cost more or be scored as a net expense. Unless of course, you offer up some type of offset, such as an origination fee or assessment. However, most soybean growers have learned their lessons and will try to remove the "O" word from any future policy discussions.

Second, there's the perception, that the farm lobby and farm programs are vulnerable---perhaps more so than ever before. With the death of the honey program and the phase out of wool and mohair programs, some of the harshest critics of all farm programs were finally able to claim victory. And they won't be satisfied with just one or two wins under their belts. They will be back for more.

As an influential member of the House Appropriations Committee told me in a recent interview, "Every farm program is going to be carefully reviewed in terms of whether it is necessary and operating efficiently." This Congressman was convinced that even farm program critics would work with him to preserve programs that are "absolutely essential." However, in his infinite wisdom, he would not define "absolutely essential."

One must assume that this member, who hails from prime corn and soybean sections of Illinois, will undoubtedly define corn and soybean programs as absolutely essential. However, there is some question as to if he will defend the current payment limitation structure. Will he and other members of the appropriations committees support continued funding for other farm programs, such as cotton?

Another risk is that, in the midst of these upcoming budget battles, farm organizations will splinter and start taking pot shots at each other. Worse yet, they may stand silent while some of their own are down for the count. Some of the wool folks are still licking their wounds and wondering where the other farm groups were when they were being attacked.

A friend recently pointed out that certain farm groups wouldn't warm up to each other even if they were cremated together. If that's the case going into the 1995 Farm Bill, farm programs could be dramatically altered or dismantled by non-farm interests.

#3. In Search of Flexibility

Absent a higher loan rate, what else could a soybean grower want? In top soybean producing states, the answer would likely be flexibility. Many farmers would truly like to plant according to market signals and to practice crop rotations without fear of losing farm program benefits. But in many cases, current policy options limit their ability to do so.

Policy makers have inched toward greater flexibility, through the 0/92 program and provisions which enable growers to swap corn and sorghum plantings while maintaining base. Of course there's also the normal and optional flex acres, which enable growers to plant a portion of their base to other crops, while saving the federal government money. But the setting may finally be right to go further down the flexibility trail by establish a normal crop acreage for each farm.

This plan would be the total of a farm's crop specific bases, plus the average acreage planted to oilseeds during the past five years. Base would be preserved, but farmers could rotate a basket of crops on their farm specific base.

Different variations of this concept have been tossed around since it was enacted by USDA in the late 1970's. The idea resurfaced in 1985 when it was proposed by Senators Rudy Boschwitz and David Boren. In 1990, a version of NCA was proposed by Senators Kerrey, Daschle, Harkin, Conrad and Exon as part of their Farm Income and Flexibility Act.

In the past, this NCA concept has been shot down because it is referred to as decoupling, a word that conjures up all sorts of nasty images in farm country. There's a valid fear of what would happen to land values once you break the link between farm program base and payments.

This concept also sends chills up the spines of those soybean producers who fear that it could lead to increased production of soybeans in the short term, and drive their prices into the ditch. And then there are the folks who think unlocking the connection between production and payments will only make it more difficult to defend farm programs in future budget debates.

Yet, you could also argue that farm programs are currently being decoupled from payments every time flex acres are increased and payments are cut. You could also argue that once farmers are allowed to plant according to market signals, prices might improve. If some of these concerns can be addressed, I think some version of an NCA will resurface in the 1995 Farm Bill debate. One possibility: an environmental base acreage concept, with a few extra carrots provided as incentives.

Correctly structured, this could give farmers much needed simplicity and flexibility, while winning the support of the environmental community.

That's because some environmental groups realize that crop rotations are at the very heart of their mission to reduce soil erosion and improve water quality. They dabbled in this area in 1990, with creation of the Integrated Farm Management option. The idea was sound, but the final legislation was far too complex and unworkable for most farmers. And then, the department worked on the language for months before sending the program out into the countryside with hundreds of additional strings attached. Needless to say, it's been a "Dud" with a capital D.

#4. Environmental Agenda

The environmental groups I've talked with will certainly be looking for more than just crop rotations. They'll be looking at some type of carrot to assure a basic level of participation in farm programs, perhaps with a base payment. One idea being tossed around would establish a base level of income protection, but provide additional payments for adopting some type of "green" practice.

Critics will charge that a "green" ticket approach removes the traditional role of production adjustment and price support from farm programs. There's also the concern that green payments or "tickets" will have an undue economic influence on land values.

Yet, environmental leaders will argue that more must be done to preserve soil and clean up the nation's water supply---either through the Farm Bill, the Clean Water Act, or a host of other programs.

They will also argue that some USDA conservation programs already serve as "green payments" to farmers and may play a greater role in transferring income than basic commodity programs. In fact, one environmental leader has developed a database which illustrates the amount of money flowing from Conservation Reserve Program contracts into each congressional district or state.

Their research shows that, when you look at the state of Texas in 1991, ASCS sent out \$774 million in payments to producers. Of that amount, \$158 million went to CRP contract holders. That's about \$18 million more than what cotton growers received for participation in their program.

Within the soybean industry, there's already a precedent established for green payments. According to USDA, the first government involvement with a soybean program came under the Soil Conservation and Domestic Allotment Act of 1936. At that time, soybeans harvested for grain, hay, or seed were classified as soil-depleting, while soybeans left on land or turned under for green manure were soil-building. Farmers who participated in this soil conservation program received direct payments if they reduced their acreage devoted to soil-depleting crops and increased their acreage of soil-building and soil-conserving crops.

While we're not likely to turn the clock back to 1936, this type of knowledge could be used as the basis for some creative policies for the future.

Rather than green payments, some agricultural groups believe that environmental tax credits might be a better, more equitable method of encouraging crop as well as livestock producers to adopt practices that will improve the environment. The only problem with this idea is that it assumes there will be farm income from which to make deductions. If some of USDA's long-term income projections are correct, fewer and fewer producers may be looking for deductions.

#5. Conservation Reserve Program

Like an eight ton gorilla looming over farm income prospects, the Conservation Reserve Program (CRP) will be perhaps the most important issue that the agricultural community must deal with in the 1995 Farm Bill.

The first round of contract expirations will unleash about two million acres. However, in 1996 and 1997, another 22 million acres could be on the market. The entire 36.5 million acres could be available by 2001. Of this total, USDA estimates that almost four million acres had previously been planted to beans.

My friends in the oilseed processing industry tell me that, with NAFTA and perhaps some unforeseen successes in the GATT round, we could need millions of acres in additional production to fulfill demand. For some parts of the country, where farm-related industries have been basically shut-down from large CRP enrollments, this would be welcome news.

But even if this is true and commodity prices send out signals to produce, the manner in which those acres are brought back into production could wreak havoc throughout the countryside. That's not to mention the screams that will be heard from the environmental community.

Current CRP contracts cost the government about \$1.8 billion annually. For budget reasons alone, this level of support will not continue when the first contracts start to expire in October of 1995.

Several options are being discussed, such as extending contracts in areas where USDA could get the most environmental bang for the buck. Another concept would offer farmers a menu of options, short of returning to full crop production. This might provide some type of payment based on the perceived value of the option, such as haying and grazing or wildlife habitat. There's also talk within the environmental community of purchasing conservation easements for the purpose of permanently retiring some farmland. More than one has mentioned that the days of the ten-year contract are long gone.

Conclusion

In looking ahead toward the 1995 Farm Bill debate, it will be crucial for members of Congress, USDA leaders, and farm organizations to develop workable solutions to these issues. They should try to design policies that enable farmers to continue producing an abundance of food and fiber for this country, protect vital natural resources and enhance farm income.

The easiest route for soybean growers or members of any farm organization, would be to take the ostrich approach to these future policy decisions and avoid the tough choices that must be made. However, one can only hope that farm organizations will come forth with their own pro-active plans, and avoid getting their tail feathers clipped.

Outlook '94

For Release: Wednesday, December 1, 1993

INDUSTRY VIEWS AND PERSPECTIVES - OILSEEDS

Michael V. Krueger
Vice President, Agri-Mark, Inc.

Nineteen years ago next month I was a new management trainee at a grain elevator in Minot, ND. The excitement of the great Russian grain deals was still in the air. The manager had just completed loading five cars of wheat and had given me the bills of lading to hand carry to the train depot. After all, there was probably a Russian vessel waiting in Duluth for these five cars of North Dakota wheat. In fact, the manager had told me to write Russian Trace across the face of the ladings to ensure they were handled expeditiously. I was finally part of something big and meaningful. Big business. Russian business. I dutifully wrote Russian Trace (R-U-S-S-I-A-N T-R-A-C-E) on the ladings and hustled them to the depot.

Shortly after I returned to work, the manager received a phone call and quickly started to laugh loudly. It was the railroad agent, wondering what RUSSIAN TRACE meant. I soon found out that I should have written R-U-S-H AND T-R-A-C-E on the ladings. That neither the cars nor me had anything to do with any Russian grain deal. I'm certain they're still laughing today.

I'm not quite as naive today as I was then. Hopefully, some of my ideas on the oilseed outlook in particular, and the U.S. commodity situation in general will be informative.

I want to start talking about a couple of the minor oilseeds. The term minor oilseeds was coined sometime during the creation of the 1990 farm bill. The 1990 farm bill marked the beginning of life as the USDA knows it for sunflowers and canola. Minor oilseeds is probably a bit of a misnomer for these two crops in the rest of the world, but in terms of U.S. production and government programs they are certainly minor oilseeds, and most likely destined to remain "minor".

Marketing loans, loan deficiency payments, and 0-92 have all become familiar terms since the inclusion of minor oilseeds in the farm

program. The impact of these programs has been significant in the upper midwest, especially the Dakotas and Minnesota. The impact of these programs has not been significant on a national level, however, it may be significant as a proving ground for marketing loan programs for soybeans, wheat, corn and feed grains if world trade conditions result in the full scale use of marketing loans.

Inclusion in the farm program coupled with the ability to plant minor oilseeds on 0-92 acres has breathed fresh life into a dying sunflower market. Exports of raw oil sunflower seed dropped from over 1.5 million tons in the early 80's to almost zero today. The crop was too large to rely on a fledgling crushing industry as its only source of demand. With no farm program support levels in place, prices collapsed and farmers eliminated sunflowers from their rotation. The 1993-94 crop year, as Nancy pointed out, brought nearly a 30% increase in sunflower plantings. Much of the increase was sunflowers planted on 0-92 corn and barley acres. While the acreage was up sharply, final yields will be very disappointing. The same wet, cool summer that caused problems nearly everywhere west of the Mississippi has also cut sunflower yields. My expectation is that the final USDA sunflower production number that will be released in January will be 18% to 20% smaller than the numbers indicated in the October USDA report. They'll be smaller because of a higher abandonment and much smaller yields per acre. They simply didn't make it to full maturity.

In spite of this season's production problems, I believe we'll see at least a 10% to 15% increase in sunflower plantings in the spring of 1994. The 0-92 option for barley and corn will again be very attractive. Our preliminary analysis of net returns per acre for the coming season show that oil sunflowers planted on 0-92 barley acres has the potential to show a \$28/acre better return than planting barley. We won't know the full story until the estimated barley, wheat and corn deficiency payments for 1994 are announced later this winter. We already have new crop (1994) oil sunflower bids available that will net producers in the eastern Dakotas and western Minnesota in excess of \$10.00 per cwt. Farmers are getting tired of growing feed barley that is only worth \$1.50 to \$1.75 per bushel. In some instances, it makes sense to 0-92 wheat base and plant sunflowers with the current high new crop sunflower bids available.

Planting seed availability could be a problem this spring. The sharp increase in oil sunflower acres last year depleted much of the seed industry's residual supplies of planting seed. They're scrambling to increase seed stocks in the southern hemisphere to meet the anticipated demand.

The very tight ending stocks situation for sunflowers the past two years and the resulting price and supply volatility may prompt bird food processors and oil processors to consider contracting acres in 1994. This hasn't been done for several years.

Canola, another minor oilseed in the U.S., hasn't shown the dramatic acreage increases that it has in other countries. Total U.S. canola acreage in 1993 was estimated to be 193,000 acres. Approximately half of this acreage was in northern MN and ND. The cool, wet seasons we had in 1992 and 93 were almost perfect for canola and yields were very good. We expect to see acreage in ND and MN nearly double in 1994, with all of the increase coming in the northern fourth of ND and extreme northern MN. ADM is now crushing canola at Velva, ND. This should provide a more stable and available market for farmers in this area. ADM at Velva is quoting a new crop canola price. The crushers in the eastern half of the state have not yet committed to crush canola next year and therefore haven't been willing to quote a new crop price. Interest in canola is strong, however, over the longer term I don't think we'll see sharp increases in acres in ND and MN because of climatic conditions or until plant breeders develop improved varieties. Traditionally, sunflowers outproduce canola except in the far northern parts of these states. The threat of late season heat and drought will keep acres from expanding very rapidly. Most of the ND and MN acres have been contracted acres, not open market acres. I also want to point out that the large canola acreage increase in Manitoba and Saskatchewan has been successful the last two years because of the unusually cool, wet summers. I would expect that under more normal growing conditions, yields in these areas could be substantially less than 1992 & 93.

Crambe is another minor oilseed that appeared recently in North Dakota. This crop is still in the very early stages of development and the acreage has been small, but growing. We went from about 30,000 acres in 1992 to 55,000 acres in 1993. Crambe is not included in the minor oilseeds portion of the farm program, but can be planted on 0-92 acres. National Sun Industries has been responsible for the contracting and crushing of crambe.

Turning away from the minor oilseeds back to soybeans there are a few areas of concern that I have for both the short term and long term outlook. Obviously, the progress of the southern hemisphere soybean crop will be the single most important element of the short term price outlook. Soybean ending stocks in the U.S. will be tight. We believe they'll be even tighter than the 170 million bushels currently projected by the USDA. One reason is that we believe the oil and meal yields per bushel of soybeans will be smaller than currently estimated because of lighter than normal

test weight in the western belt. This should lead to increased crush and smaller ending stocks. The same low test weight problem exists with much of the corn in the western belt. Lower test weight and lower protein corn, coupled with the relatively low protein content of the wheat, could lead to increased domestic feeding of protein meals.

Nancy addressed the probable loss of soybean meal exports to the EC because of CAP reform. Non Grain Feed Ingredient exports to the EC, specifically corn gluten feed, may also suffer a significant reduction because of CAP reform. U.S. exports of corn gluten feed to the EC have been in excess of 4 million metric tons annually. If we lose part or all of this market, it seems to me that up to four million tons of corn gluten feed will have to compete directly with soybean meal in the U.S. domestic market. This could have large implications for soybean meal usage and prices. When I look at the ten year history of U.S. soybean meal exports I'm not very encouraged that we can replace lost meal or corn gluten feed exports. While world soybean meal exports have grown steadily, U.S. meal exports have been relatively stagnant.

The soybean acreage outlook for 1994 is probably more uncertain today than it has been in recent memory. I can't argue with Nancy's estimate of 60.8 million planted acres of soybeans. The 1993 planting intentions were 61.6 million acres prior to all of the rains and flooding. We expect that soft red winter wheat acres will be down 3% to 4% from last year with the reduction caused by the wet fall and low wheat prices at planting. We are almost assured of a wet start to the planting season in the western belt. These issues could push corn acres to soybeans regardless of the price ratio between corn and soybeans this spring.

I was glad to see Nancy address some of the policy issues instead of just the numbers. I believe that the numbers have carried less importance in recent years in all commodities, not just oilseeds. We need to spend more time talking about the policy issues and decisions that create the numbers instead of the actual numbers themselves.

I've witnessed an incredible change in the U.S. grain industry in the 19 years since I tried to trace rail cars to Russia. Those were the days when we talked about the growth of exports increasing forever. Those were the days when decisions were made to double export capacity at almost every export region, 50% of which now stands idle. Those were the days that brought rapid expansion to the country elevator infrastructure. Those were the days of railroad deregulation that sponsored train rates direct from country elevators to export terminals and then to domestic mills.

Those were the days when if you wanted to impress a young grain merchant you let him listen in on an overseas phone call with Ivan, as the trade affectionately called the Soviets. Those were the days when the rallying cry from the industry was like the TV show Home Improvement - "MORE POWER". Those were the days.

In ten short years its all changed. We have a fraction of the companies and people left in the grain business. The cuts have been at every level, from the country elevator through the exporter. Increased government control of exports has made the business largely profit proof. Today more than 50% of soybean oil, cottonseed oil and sunflower oil are sold under EEP, COAP or SOAP. These percentages grow when you add in PL 480 and other government donation or credit programs. The percentage of total export business done without any government involvement is relatively small. The old fashioned, aggressive grain merchant has gone the way of the American cowboy. We read about them, but seldom see them anymore. In their place is a small group of government employees who decide what countries will be targeted for credit and export subsidy programs, what class of wheat or oil they will be allowed to buy, and at what bid price and bonus the business will get done.

Major changes have also taken place at the producer level. Instant information is available to nearly every farmer and its available for less than \$500 per year. There are no secrets anymore. The big guys no longer enjoy an informational advantage over the small farmer in North Dakota. With a click of the computer mouse he can watch color weather radar for any portion of the U.S. There are a number of meteorological companies who sell their forecasts (and trading recommendations) for instant delivery on a number of electronic services. The pace of information technology will only increase and prices for this information will probably get cheaper.

Volume of trading in commodity futures markets has also grown enormously in the last ten years. The growth of managed accounts, the funds, aided by increased position limits, allow non commercial grain interests to dominate futures trading. The day to day influence of the large grain companies, whether they are oil processors, exporters or flour millers, has diminished to the point where they are seldom a factor in market moves. Delivery economics, a mainstay of the fundamental approach to market analysis, plays a much smaller role in the price discovery process.

Our conclusions reached at this outlook conference based on how we see the numbers will have to be tempered with how we see governmental actions. This has always been the case to some extent, but I believe it has to be more of a factor today. Markets

have aptly demonstrated that tight ending stocks, in the U.S. or world, don't have to translate into stronger markets. Will we extend the credit necessary to sell our products? Will potential buyers be granted EEP allocations? Will bids and bonuses be accepted? What about NAFTA and GATT and all of the other trade agreements that are now flowing quite freely? Will they make the plans I have today worthless tomorrow?

Its these policy decisions and actions that really shape our markets and ought to command more of our attention. I was happy to see Nancy Morgan address many of these issues in her presentation. All of these issues will continue to make our businesses interesting and even more unpredictable.

Outlook '94

For Release: Wednesday, December 1, 1993

1994 OUTLOOK FOR U.S. FRUIT AND TREE NUTS

Dennis A. Shields
Agricultural Economist
Economic Research Service
U.S. Department of Agriculture

Fruit Price Outlook

The 1993 *fruit price situation* was characterized by lower retail prices than the year earlier during the first half of 1993. Larger supplies and lower prices of fresh-market apples, oranges, and bananas were reflected in the Consumer Price Index (the CPI) for fresh fruit. The CPI averaged 185 (1982-84=100) during the first 6 months of 1993, down a few points from a year earlier.

But beginning in July, higher prices for some fresh summer fruits, including plums, nectarines, cherries, grapes, and Valencia oranges, boosted the fresh fruit CPI. In September and October, higher prices for new-crop apples and late-season fresh Valencia oranges helped maintain the CPI above a year earlier.

The *fruit price outlook* calls for moderately higher fruit prices into 1994. Reduced supplies and good quality fruit are expected to lead to higher grower and retail prices for fresh-market navel oranges, grapefruit, and some varieties of apples. However, prices that are close to last year for bananas and lower for pears are expected to moderate the rise in overall fruit prices.

Higher Than Year Earlier Citrus Prices in 1993/94

Total citrus production is down 7 percent in 1993/94--most citrus crops are lower following last year's bumper crops in Florida and California. Although it's smaller, the new citrus crop, if realized, would be the third largest on record (the record was set in 1979/80).

In general, this means that, barring any weather-related production losses this winter, grower and retail prices for fresh citrus will bounce up moderately from lows last season.

Smaller California Orange Crop

The California orange crop, which is mostly sent to the fresh market, is expected to be down 6 percent in 1993/94 from a year earlier. A 13-percent smaller California navel crop will contrast with an 8-percent larger Valencia crop. Navel quality is generally good. Grower and retail prices for fresh-market oranges through the navel season will likely run higher than last year.

Orange Juice Production Down

Florida is expecting a 172 million box crop, down 8 percent from last year. Primarily because of this smaller Florida orange crop and slightly lower juice yields, U.S. orange juice production is expected to total just over a billion gallons, down 10 percent from the record set last year. Higher beginning stocks will partially offset lower production, consequently, the U.S. orange juice supply, including imports, is expected down only 3 percent from 1992/93.

Grower prices for processed oranges will likely increase from last year's lows that vividly show on the chart. Retail orange juice prices are expected to be higher in 1994 following wholesale price increases in the second half of 1993.

Smaller Florida Grapefruit Crop

The 1993/94 Florida grapefruit crop will be smaller than last year's record. High sugar content is expected to result in good-eating fruit. The California desert grapefruit crop is unchanged from last season, and Texas and Arizona expect to harvest larger crops in 1993/94. Grower prices for grapefruit are expected to be above last year when a bumper crop and weak export demand resulted in low prices.

Smaller 1993 Apple Crop and Larger Winter Pear Crop

The October forecast for the U.S. apple crop was lowered from the August forecast, leaving it 2 percent less than the 1992 record. The Washington State apple crop is forecast the same as last year, but the fresh packout may be higher because of excellent quality. However, in other states, harvest has fallen short of expectations. Because of a later start to the season, grower prices have been higher than last year and apple stocks on November 1 were higher. While Red Delicious stocks were higher, Goldens and Grannys were down. The apples from all growing regions are expected to store well through the marketing season, reducing the chance of a price-depressing surge that can happen when fresh-market apples don't hold up in storage. Processor demand also appears to be good. Grower and retail prices for apples are expected to be slightly above a year earlier for the 1993/94 season.

Pears

Winter pears (marketed from October through June) will be more plentiful. Production of these pears in 1993 was up 8 percent from a year earlier. Lower winter pear prices will help moderate expected higher fruit prices in early 1994.

Most of the rest of noncitrus fruit crops in 1993 are now history. Grower prices were generally higher, except for strawberries, where a record crop has led to mostly lower prices since May. Peach production in the Southeastern U.S. rebounded in 1993, but grower prices were nearly the same or higher as California harvested a smaller crop. Smaller crops of other summer fruits, including plums, nectarines, apricots, cherries, and grapes helped boost grower prices in 1993.

Chilean Fruit Production and Exports Up Slightly in 1993

The quantity and quality of Chilean fruit imports, along with domestic fruit production, are important components of U.S. noncitrus fruit supplies. The weather in Chile has been good for fruit production, and normal crops and exports are expected for the season just beginning. Consequently, ample supplies for the U.S. market are expected, which could moderate higher consumer fruit prices in 1994.

Fruit imports from Chile rose rapidly throughout the 1980s. Trees and vines have been reaching mature yields; so, the U.S. market may be maturing somewhat and Chile is diversifying exports into non-U.S. markets.

Larger Supplies of Most Tree Nuts in 1993/94

A bumper crop of walnuts, and record crops of pecans, hazelnuts, and pistachios are expected to put downward pressure on grower prices in 1993/94.

California Walnut Crop Up 23 Percent

The 1993 California walnut crop is forecast up about 25 percent more than last year, but 3 percent less than the record high in 1991. Lower beginning stocks mean that walnut supplies are expected to be up just 7 percent. Because of the larger 1993 walnut crop and larger supplies of pecans, a walnut substitute, the season-average grower price for walnuts is expected to decline from last year's record. Imports were unusually high last year because of the higher domestic prices.

Another Record Hazelnut Crop in 1993

The 1993 U.S. hazelnut crop (Oregon and Washington) is forecast at another record and more than one-third higher than the 1992 record. Expanding production in recent years has led to lower grower prices, which declined from \$820 per ton in 1989 to \$552 per ton last year. Grower prices are expected to decline again in 1993/94, which will likely lead to higher domestic consumption and exports.

Record Pecan Crop in 1993

U.S. pecan production is expected to be a record, more than twice last year's paltry crop and topping the previous record in 1963. Favorable growing conditions led to larger crops in all reporting States.

The large U.S. crop will boost 1993/94 supplies more than 30 percent and likely lead to lower pecan prices. In recent years, smaller supplies and higher pecan prices have reduced U.S. consumption and encouraged users (especially the baking industry) to substitute other nuts. In 1993/94, lower prices are expected to boost consumption of pecans and help regain market share.

Pistachio Output Unexpectedly Higher in 1993

The 1993 pistachio crop was expected to be lower than last year's record because it is a "down year" in the trees' alternate bearing pattern. However, the California Pistachio Commission's first forecast indicates that the inshell crop will be larger than in 1992, because more trees are reaching higher (more mature) yields. The cool summer and favorable moisture may have also contributed to the surprising increase in production. Although an expected lower shellout will result in slightly lower marketable production, pistachio supplies in 1993/94 are forecast to be record high due to a larger carryover. Domestic consumption, exports, and ending stocks could all hit records in 1993/94.

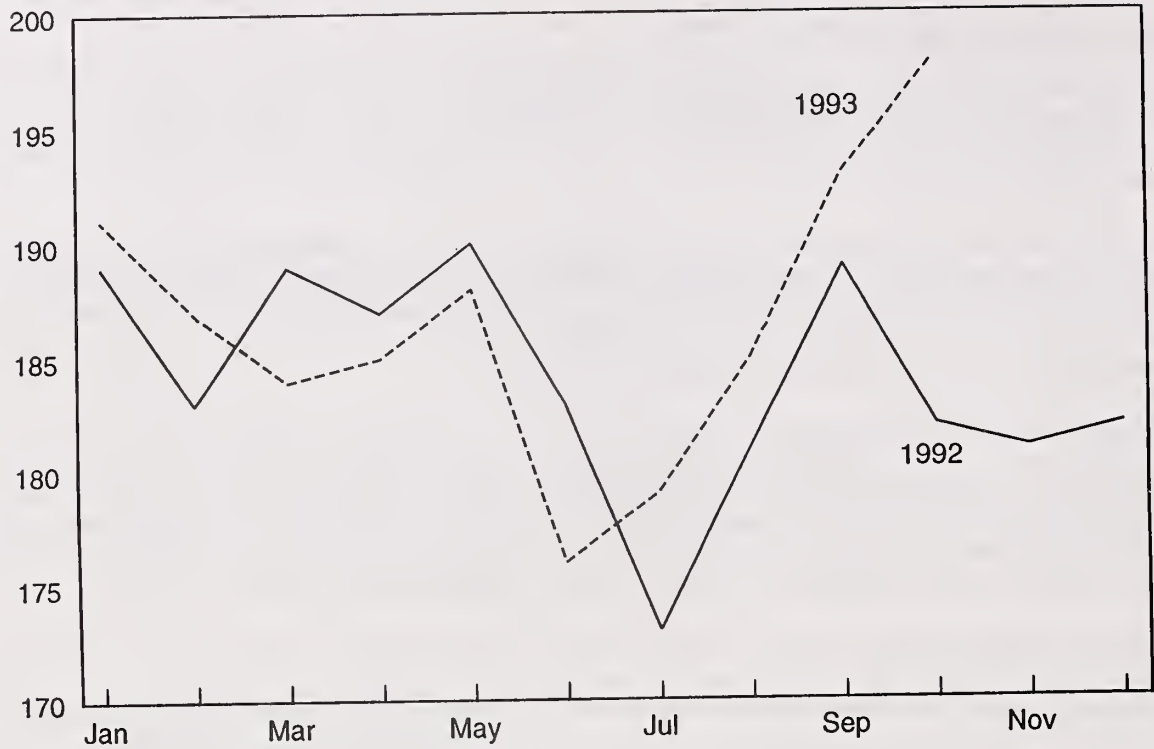
Exports have been booming in recent years, increasing more than four-fold from 1989/90 to 1992/93. Because of large 1993/94 supplies, grower prices could be lower than in 1992/93. The season-average grower price for pistachios was \$1.03 per pound (in-shell) in 1992/93.

U.S. Almond Supply Declines for 3rd Consecutive Year

U.S. almond production (all in California) in 1993 is forecast down 14 percent from 1992. Nut sets were light, but quality is expected to be excellent. If the forecast is realized, production would be the lowest in 7 years. The smaller crop and low beginning stocks have reduced the almond supply. With continued strong domestic and export demand, the season-average grower price in 1993/94 is expected to be well above the 5-year average of \$1.09 cents/lb.

Fresh Fruit: Consumer Price Index

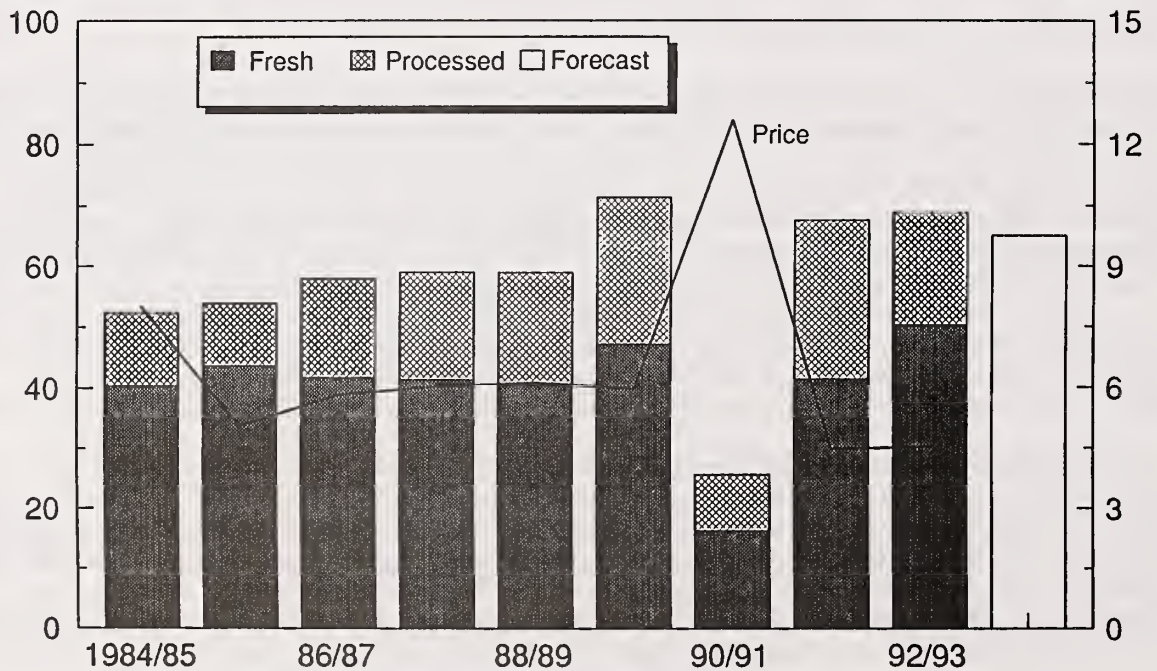
% of 1982-84



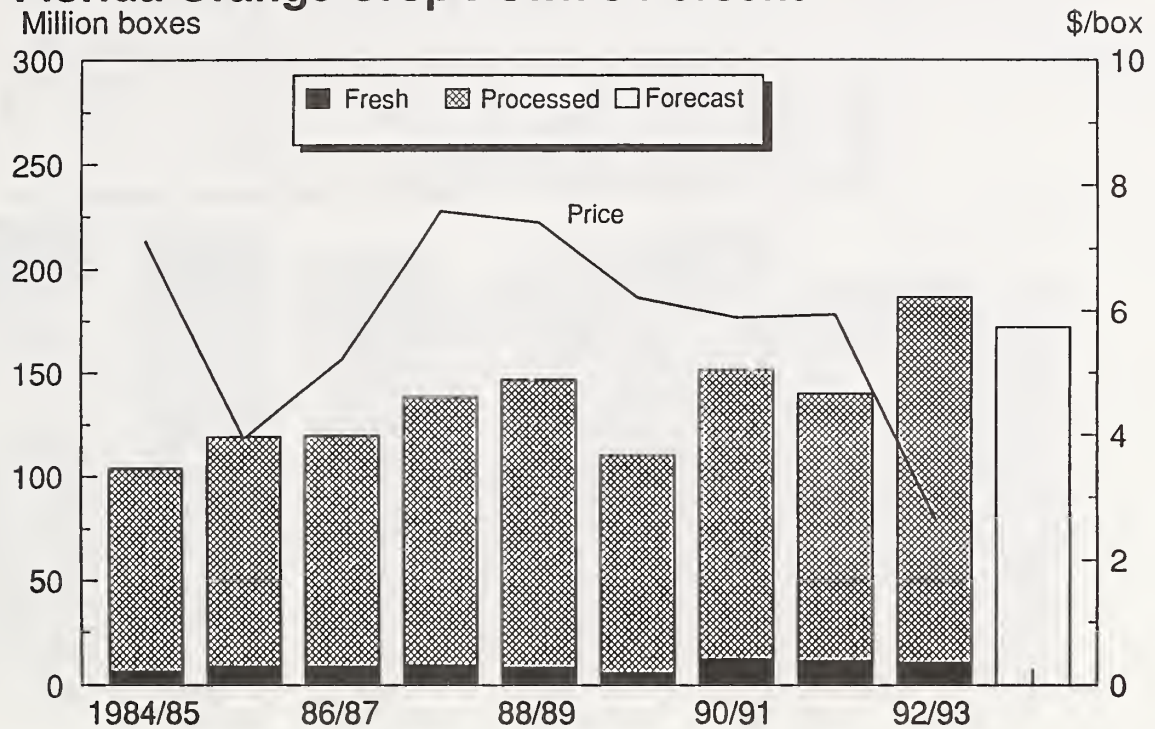
Smaller California Orange Crop In 1993/94

Million boxes

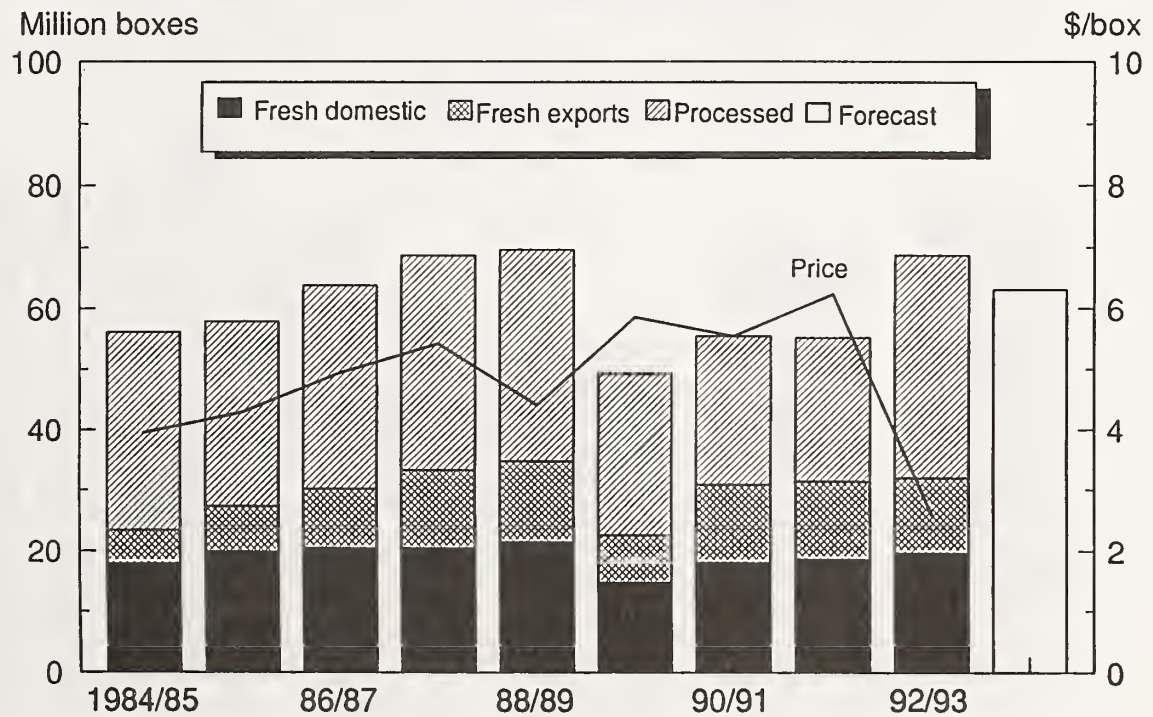
\$/box



Florida Orange Crop Down 8 Percent

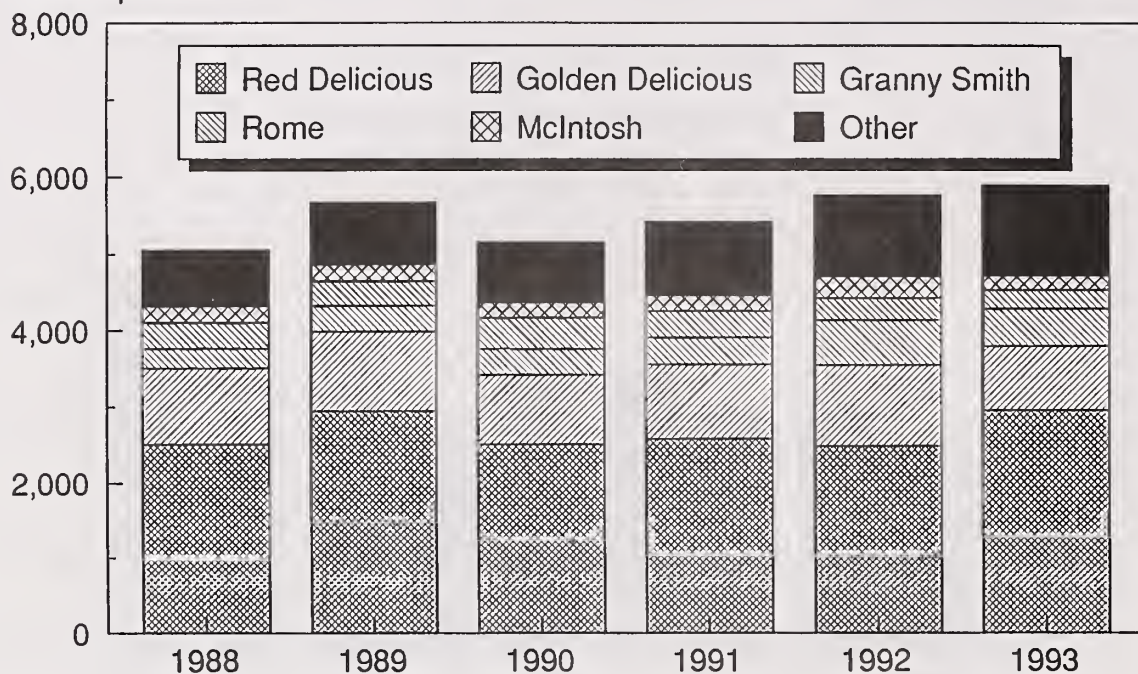


U.S. Grapefruit Production Also Down



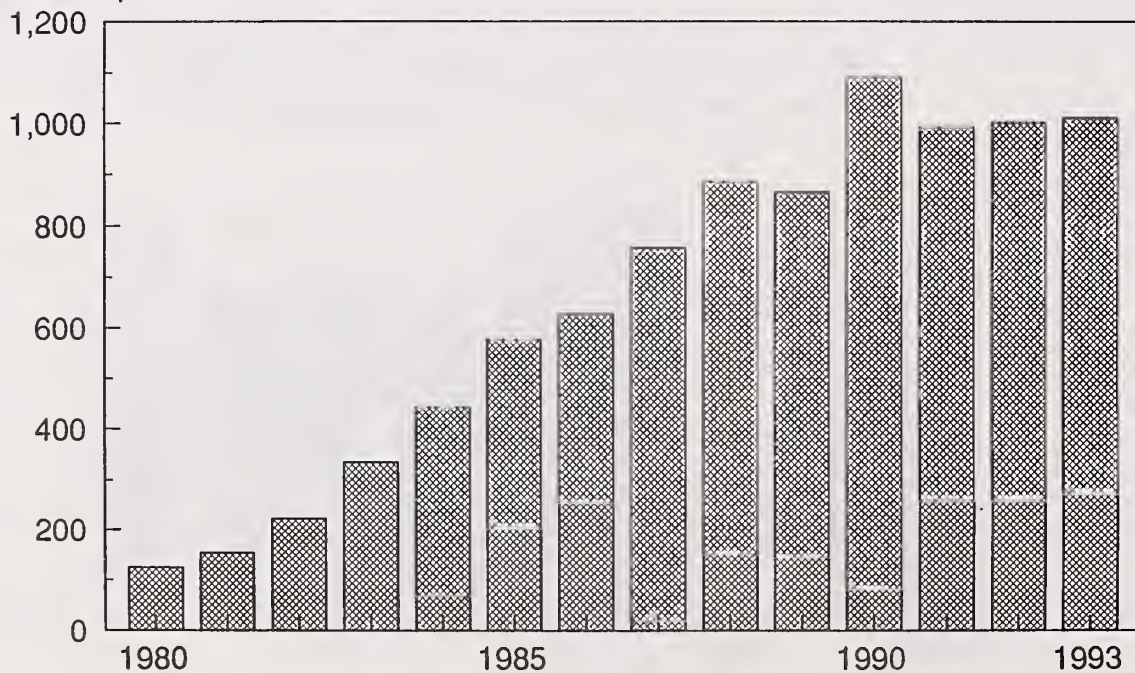
U.S. Apples In Storage, November 1

Million pounds

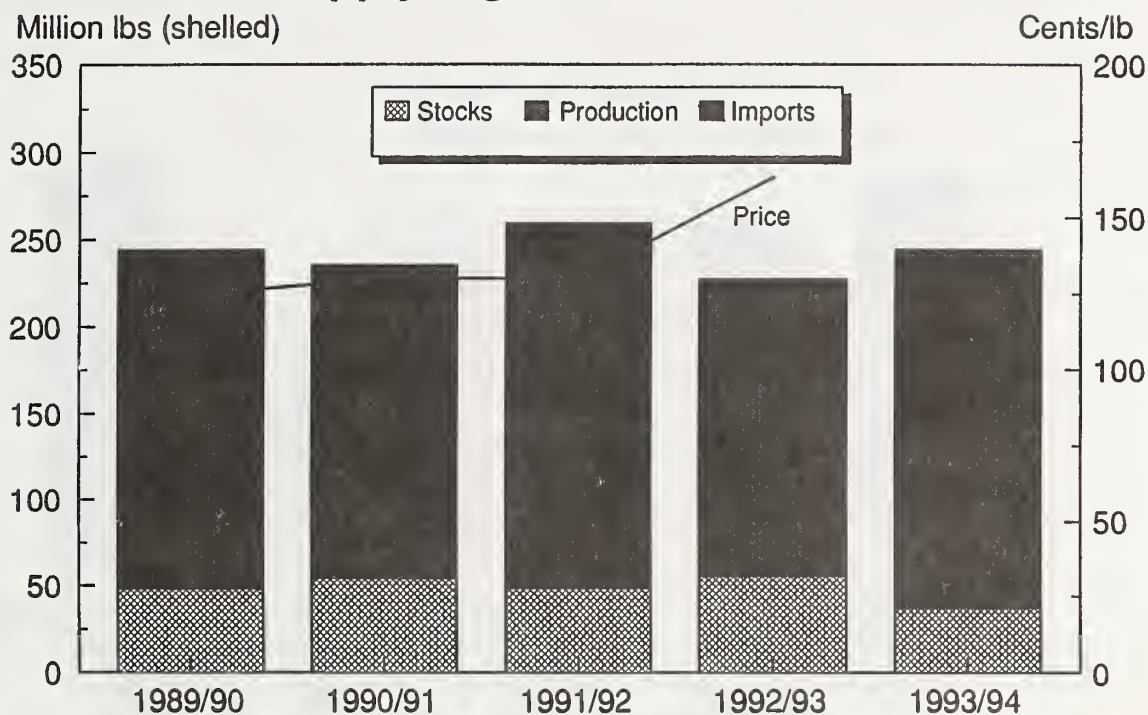


U.S. Fruit Imports From Chile

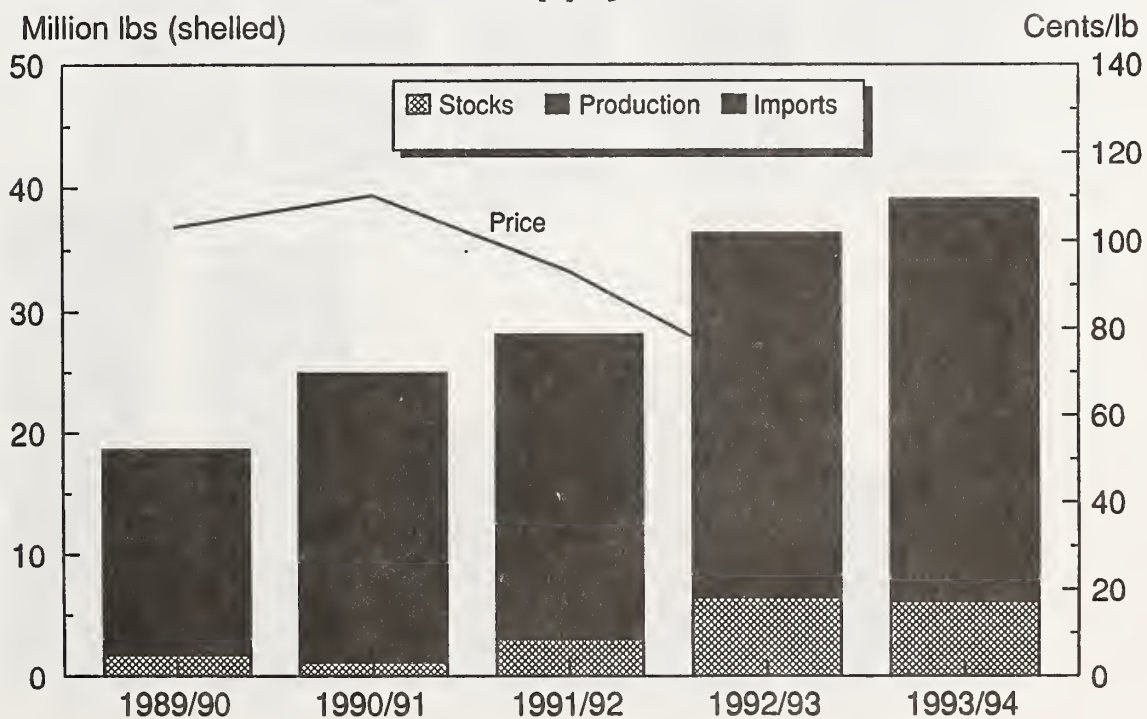
Million pounds



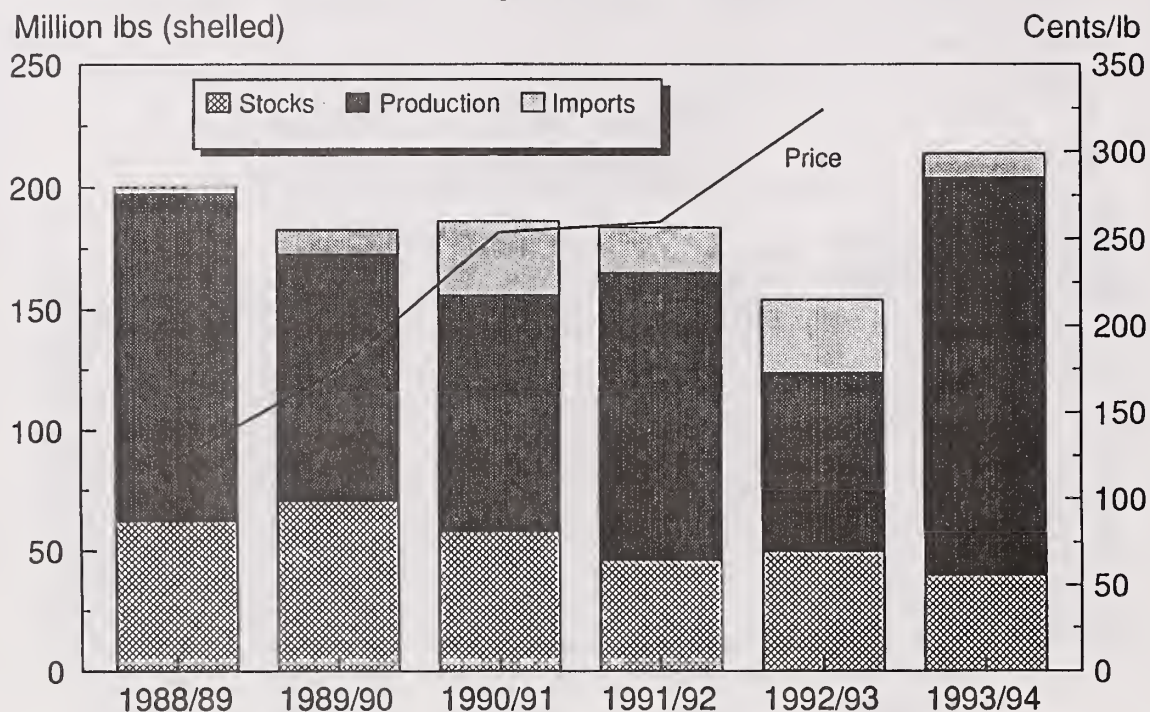
U.S. Walnut Supply Higher in 1993/94



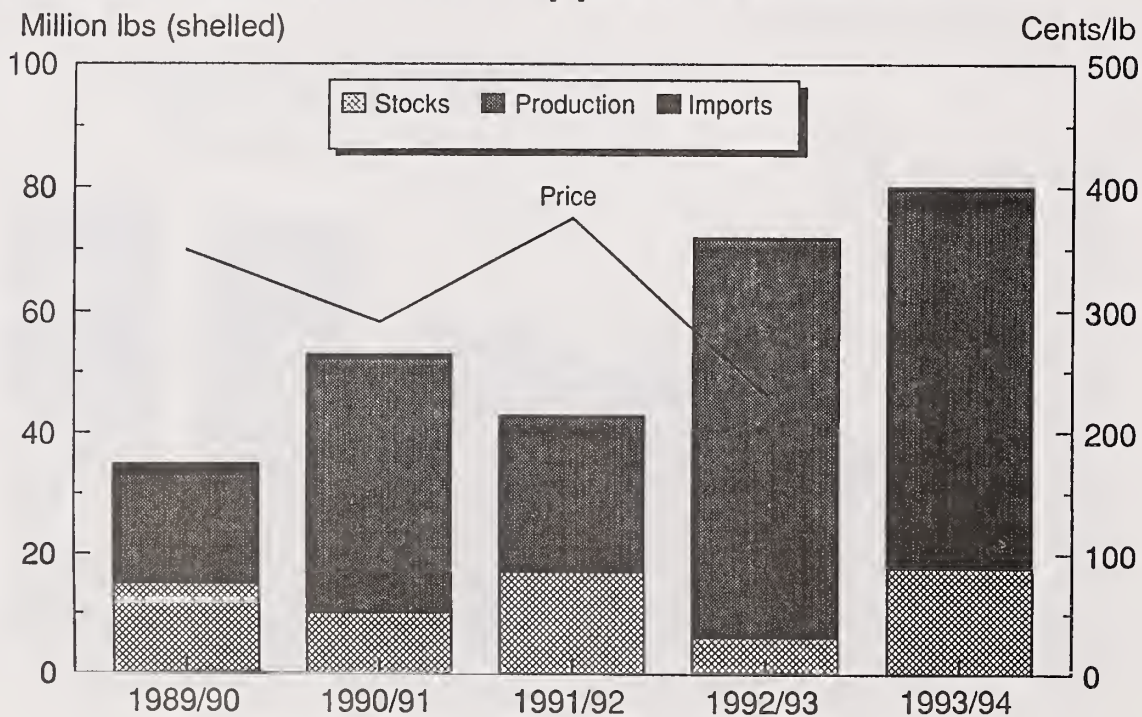
Record U.S. Hazelnut Supply in 1993/94



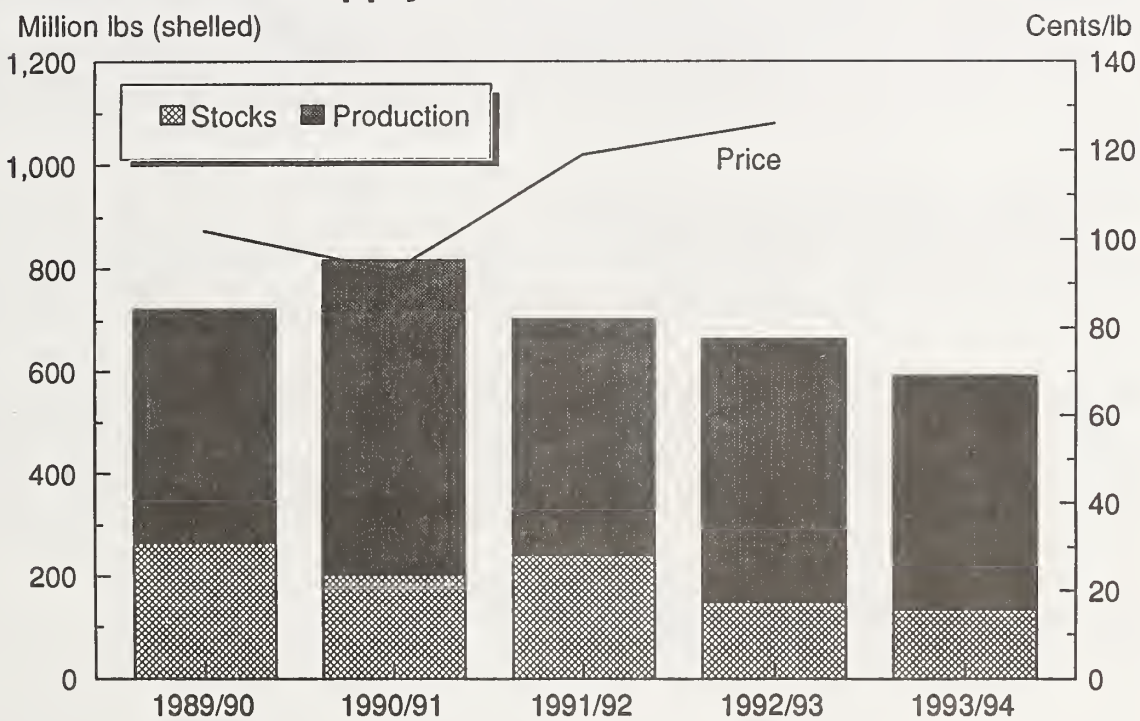
Record U.S. Pecan Crop in 1993



Record U.S. Pistachio Supplies in 1993/94



U.S. Almonds Supply Down in 1993/94



Outlook '94

For Release: Wednesday, December 1, 1993

U.S. VEGETABLE SITUATION AND OUTLOOK

John M. Love
Agricultural Economist, USDA/ERS

The U.S. vegetable situation and outlook covers three major topics: (1) the economic status of the industry and prospects for 1994, (2) recent trends in industry productivity, and (3) pesticide use patterns in vegetable production. Greater detail about the economic situation in the industry is available in the recently published **Vegetables and Specialties Situation and Outlook Report** (November 1993). The discussion about productivity relates trends in per-acre value to per-acre yield. Finally, pesticide use patterns are presented to set the stage for further discussion by our panelists on "minor use" pesticide issues.

1993 Value of Production 5 Percent Higher

The vegetable sector's 1993 value of production is likely to reach \$11.4 billion, a 5 percent increase over 1992 (table 1). The 5 percent increase is due almost entirely to a projected 20 percent increase in the value of potatoes. The value of fresh-market and processing vegetables likely remained flat in 1993.

In 1993, total sector output is projected to go unchanged at 1.1 billion cwt, compared to 1992. Larger processing tomato production offset lower production of other processing vegetables, fresh-market vegetables, and potatoes. More acreage in vegetables and no change in production indicate lower yields in 1993. Lower yields were estimated for potatoes, dry edible beans, and processing vegetables. Yield estimates for fresh-market vegetables will be published in January 1994.

**Fresh-market Retail Prices Rose 6 Percent in 1993,
Processing Prices to Rise in 1994**

Fresh vegetable and potato prices increased a combined 6 percent at retail in 1993. Retail prices for fresh-market potatoes rose about 15 percent while fresh vegetables rose only 2 to 3 percent, compared to 1992. A 21 percent increase in the average monthly farm-level price for fresh potatoes in 1993 led to the large increase at retail. Also, the 1993 farm-level price for fresh-market vegetables increased only slightly, holding down retail increases.

Processed potato, tomato, and other processed vegetable prices increased only 2 to 3 percent at retail in 1993. In 1994, higher prices paid to growers for the 1993 crop of peas, snap beans, and sweet corn are likely to lift processed vegetable prices at retail. Also in 1994, tight supplies of potatoes are likely to boost retail prices for frozen potatoes.

Per-acre Revenues Increase 2.9 Percent Annually

Vegetables, in terms of farm-level revenues, are worth an average \$1,570 per acre (table 2). The per-acre value grew 2.9 percent per year over the last 10 years. Fresh-market vegetables register higher per-acre value than processing and show above-average rates of growth. Fresh-market tomatoes bring an estimated \$8,382 per acre, trending up at 6.2 percent per year. Although fresh-market sweet corn shows below average per-acre value, its growth rate is second highest at 4 percent per year.

Much of the increase in vegetable value has occurred in Florida. Florida's share of U.S. total value of fresh-market vegetables increased from 17 percent in 1982 to 22 percent in 1992. California's share of U.S. total value of fresh-market vegetables decreased from 49 percent in 1982 to 47 percent in 1992. Arizona, Texas, and New York, combined, decreased from 17 percent to 11 percent of the total fresh market.

Yields Up 1.8 Percent Annually

Growth in the per-acre value of vegetables during the 1980's is largely due to increases in yield. Only about one-third of the increase in per-acre value can be attributed to price increases (table 2). If vegetable producers are going to keep up with rising production costs over the next 3 to 5 years, yields must continue to increase.

Vegetable yields have increased 2 cwt per acre per year--about 1.8 percent annually--over the last 10 years. However, the increase has not occurred evenly across all vegetables. Processing tomatoes lead all vegetables at 16 cwt/acre/year, followed by fresh-market tomatoes at 6.5 cwt/acre/year, and potatoes, onions, carrots, lettuce, and celery at 3-5 cwt/acre/year. The trend in processing sweet corn, green beans, and green peas is less than 1 cwt/acre/year.

Differences in yield trends among vegetables may be attributed to improvements in genetic potential through breeding, shifts in regional production, regional climate differences, and profitability. Overall, through higher yields, producers kept supply even with market demand during the 1970's without increasing acreage. During the 1980's, acreage of fresh-market and processing vegetables and potatoes increased about 1 percent per year.

Input Costs Increase 1.2 Percent Annually

Input prices rose 1.2 percent per year from 1983 to 1993, less than half the rate of per-acre value. Increased chemical pesticide prices and labor wages offset decreased costs of fertilizer and interest on loans. Fuel prices in 1993 returned to 1983 levels, while taxes rose 3.2 percent per year. The net effect of per-acre value rising more rapidly than input prices indicates that vegetable production remains a profitable enterprise.

Living costs, as reflected in the CPI, rose 3.3 percent per year during the last 10 years. Of all items in the cost of living, the one rising most rapidly is medical care, 6.4 percent per year. The remaining items--food, clothing, housing, transportation, and energy--all rose less than 3.3 percent per year.

Pesticide Use Widespread in Vegetable Production

There is little doubt pesticide policy is a priority issue for vegetable growers. Reregistration deadlines under the Federal Insecticide, Fungicide, and Rodenticide Act (FIFRA) are putting pressure on the balance between sustainable crop yields and consumer protection, forcing legislators to rethink pesticide policy. The policy focus is placed on regulating risks under the Delaney Clause in the Federal Food, Drug, and Cosmetic Act (FFDCA) and FIFRA.

In 1993, the National Academy of Sciences published its long-awaited report on pesticide policy as it pertains to the diets of children. However, the report did not cause the anticipated high degree of public alarm. The report stressed its concern that fruits and vegetables are essential to a healthy diet. Also, the report emphasized that protection of longrun health in adults begins at childhood, and children are likely to eat a diet high in fruits and vegetables. The report recommended more research focusing on children's diets, the links between childhood diet and adult diseases, and ways to restrict childhood exposure to pesticides in food.

Growers and university extension personnel indicate repeatedly that the vegetable industry is concerned about maintaining crop yields with adequate pest controls. A USDA survey of vegetable growers found that they applied herbicides to 76 percent of acreage, insecticides to 78 percent, and fungicides to 56 percent (table 3). Other chemicals, including growth regulators and soil fumigants, were applied to 17 percent of vegetable acreage.

Pesticide use varies because of many factors, including the intended market for the crop. For example, processing tomato production uses more herbicides and less insecticides than fresh-market tomato production. Also, methyl bromide is used on 61 percent of Florida's fresh-market tomato acreage, while none is used on California's processing tomato acreage.

Minor Uses Still Important

The share of U.S. vegetable area in total U.S. crop area is only about 2 percent--6 million to 7 million acres of vegetables, compared to nearly 300 million acres total. This low share of area contributes to the problem of "minor uses" for pesticide manufacturers. Manufacturers traditionally bear the costs of research and development and regulatory requirements. These costs are incurred regardless of intended use, and the return on costs is a function of pesticide sales. Therefore the minor use problem puts pesticide availability at greater risk for vegetables, compared to other major crops.

Chemical pesticides have been an important input to production. An estimate of the impact on vegetable yields from a substantial reduction in pesticide use is likely to contain a high degree of uncertainty. Accounting for the many crop-pest interactions, regional-climatic differences, and market requirements is required for informed policy debate on this issue. More research is needed in this area as policies to change vegetable production practices are debated.

Table 1--U.S. vegetable industry: Area harvested, production, value of production, average value of production, and trade, 1991-93 1/

Item	Units	1991	1992	1993
Area harvested	1,000 ac	6,807	6,174	6,212
Selected vegetables				
Fresh-market	1,000 ac	1,753	1,834	1,830
Processing	1,000 ac	1,688	1,446	1,396
Potatoes	1,000 ac	1,374	1,315	1,312
Sweet potatoes	1,000 ac	78	82	81
Dry edible beans	1,000 ac	1,914	1,497	1,592
Mushrooms	Mil. sqft	--	--	31
Production	Mil. cwt	1,090	1,121	1,120
Selected vegetables				
Fresh-market	Mil. cwt	340	370	366
Processing	Mil. cwt	280	284	298
Potatoes	Mil. cwt	418	425	415
Sweet potatoes	Mil. cwt	11	12	12
Dry edible beans	Mil. cwt	34	22	22
Mushrooms	Mil. lb	747	776	780
Value of production	\$ mil	10,055	10,906	11,435
Selected vegetables				
Fresh-market	\$ mil	5,323	6,151	6,076
Processing	\$ mil	1,357	1,128	1,192
Potatoes	\$ mil	2,043	2,336	2,800
Sweet potatoes	\$ mil	149	155	152
Dry edible beans	\$ mil	528	467	537
Mushrooms	\$ mil	654	669	679
Average value of production	\$/cwt	9.22	9.73	10.21
Selected vegetables				
Fresh-market	\$/cwt	15.66	16.62	16.60
Processing	\$/cwt	4.85	3.97	4.00
Potatoes	\$/cwt	4.96	5.52	6.75
Sweet potatoes	\$/cwt	13.33	12.91	13.20
Dry edible beans	\$/cwt	15.65	21.19	24.00
Mushrooms	\$/lb	0.88	0.86	0.87
Trade				
Imports	\$ mil	1,917	1,790	2,238
Vegetables				
Fresh & melons	\$ mil	1,015	880	1,209
Canned, frozen	\$ mil	456	488	525
Potatoes	\$ mil	111	101	163
Dry beans, peas	\$ mil	29	24	21
Mushrooms	\$ mil	160	143	120
Other	\$ mil	145	154	200
Exports	\$ mil	2,118	2,232	2,493
Vegetables				
Fresh & melons	\$ mil	801	854	980
Canned, frozen	\$ mil	397	478	510
Potatoes	\$ mil	320	365	425
Dry beans, peas	\$ mil	312	231	243
Mushrooms	\$ mil	31	39	45
Other	\$ mil	257	266	290

Table 2--U.S. vegetable per-acre value of production and yield, 1990-92 1/

Item	Use	Per-acre value		Yield	
		Average	Growth	Growth	Trend
		\$/acre	--Percent per year--		Cwt/ac/yr
All vegetables		1,570	2.9	1.8	2.0
Tomatoes	Processing	1,956	2.2	2.3	16.0
Tomatoes	Fresh	8,382	6.2	2.7	6.5
Onions	Dual-use	4,094	2.3	1.0	3.7
Carrots	Dual-use	3,090	3.0	1.0	2.7
Potatoes	Dual-use	1,679	1.2	1.2	4.0
Cauliflower	Dual-use	3,291	2.8	1.8	2.1
Broccoli	Dual-use	2,394	1.2	1.8	2.0
Lettuce	Fresh	3,724	2.2	1.6	4.9
Celery	Fresh	6,318	2.1	0.7	4.0
Sweet Corn	Fresh	1,344	4.0	0.8	0.7
Snap Corn	Processing	439	2.2	0.4	0.5
Green Beans	Processing	586	1.8	1.0	0.6
Green Peas	Processing	393	1.4	0	0
Honeydews	Fresh	2,800	1.5	-0.1	-0.3
Asparagus	Dual-use	1,669	4.0	2.2	0.5
Dry beans		292	-0.3	0	0

1/ Growth rate and trend include 1980-82 to 1990-92.

Table 3--U.S. vegetables: Area treated with agricultural chemicals, 1992

Items	Area	Pesticides 1/			
		Herbicides	Insecticides	Fungicides	Other
	Acres	--Percent--			
Fresh					
Lettuce, head	206,000	68	97	76	1
Corn, sweet	154,100	75	84	41	*
Broccoli	118,600	58	95	31	1
Onions	113,600	86	79	83	13
Tomatoes	105,100	75	95	86	37
Carrots	100,300	67	37	79	13
Other	492,230	62	83	54	7
Total	1,289,930	68	84	61	8
Melons	326,300	39	65	70	5
Processing	1,315,930	90	67	34	6
Potatoes	1,067,700	81	90	72	43
Total	3,999,860	76	78	56	17

* = Denotes no use or unreportable use.

1/ Other includes mainly growth regulators or soil fumigants.

Source: National Agricultural Statistics Service, USDA.

Outlook '94

For Release: Wednesday, December 1, 1994

THE U.S. FRUIT AND VEGETABLE EXPORT SITUATION

Howard R. Wetzel
Deputy Director for Analysis
Horticultural & Tropical Products Division
Foreign Agricultural Service

I. Aggregate Export Picture

The U.S. export situation for horticultural products continues to be a bright spot in the overall agricultural export situation. U.S. horticultural exports, including fruits, vegetables, tree nuts, wine and nursery products, expanded by 5 percent in the recently concluded 1993 fiscal year to \$7.3 billion. In FY94, a further increase of 4 percent to \$7.6 billion is expected, the eighth straight year of strong increases.

U.S. exports of fresh & processed fruits and vegetables rose 3.5% to \$4.8 billion. The vegetable sector, both fresh and processed, performed considerably better than the fruit sector, which suffered in particular from excess world apple and orange supplies, which pushed prices and export values downward.

Export values for fresh vegetables and processed vegetables rose 15 and 9 percent, respectively. Meanwhile, fresh fruit exports declined 5 percent in value, but only 1.5 percent in volume. The value of dried fruit exports remained virtually unchanged in FY93 and processed fruit products other than juice expanded by 4 percent. Exports of fruit and vegetable juices eased 1.5 percent in value despite a 9 percent increase in the volume of orange juice shipped. FAS projects that the fruit and vegetable exports will experience another 3 percent increase in FY94 to reach \$5 billion.

In recent years U.S. fruit and vegetable exports have not only experienced steady growth, but also contributed an increasing share of total U.S. agricultural exports. Between fiscal years 1989 and 1994, it is forecast that our fruit and vegetable exports will jump from \$2.7 billion to \$5.0 billion, an increase of about 85 percent and account for 12 percent of all agricultural exports in FY94, versus 7 percent in FY89.

What are the factors behind the steady rise in U.S. fruit and vegetable trade? While economists generally don't agree on much, most of them would agree that a sustained trend is usually the result of several converging factors. With fruits and vegetables, it is safe to say that import demand for fresh, high quality and consumer ready products is income sensitive and therefore can be expected to expand, even in fully-developed economies, long after the demand for imported bulk agricultural commodities tapers off.

Falling barriers to trade, particularly here on the North American continent but also in Asia, have also opened the windows of export opportunity for U.S. fruit and vegetable shippers. Our efforts to capitalize on these favorable factors have also benefited by the various Market Promotion Program activities aimed at building foreign consumers' awareness of our fruits and vegetables.

II. Commodity Situation

Before touching upon some of the key geographic and policy developments expected to influence future export markets for fruits and vegetables, I would like to talk briefly about the current export situation and near term outlook for some of the major fruits and vegetables.

In the citrus sector, U.S. orange and grapefruit exports in FY 93 to its largest citrus market, Japan, dipped by 4 and 12 percent, respectively, in volume despite the recent liberalization of fresh orange imports and lower prices. Japan's economic recession continues to sap consumer appetites for imported fruits and vegetables. Canada took up much of the slack in export volumes and emerged during FY93 as the largest market for U.S. oranges. Hong Kong also boosted its purchases of U.S. oranges. U.S. citrus prices and export values are expected to recover somewhat from FY93 levels with lower expected U.S. crops. In the juice sector, frozen concentrated orange juice prices have increased due to a smaller Brazilian orange crop and the prospect of a smaller U.S. crop. During the past year, lower world prices and a competitive dollar appear to have boosted demand for U.S. juice in certain price-sensitive markets in Northern Europe - notably the UK, Benelux countries and Scandinavia.

In the deciduous fruit sector, U.S. apple exports in the past year suffered from a larger 1992 EC crop, but the smaller, more normal sized EC 1993 crop should bolster U.S. export prospects in the EC and reduce EC competition in the Nordic countries and the Middle East. Apple exports to the Far East remained at high levels in the past year and increased significantly to Mexico following the reduction, but not elimination, of phytosanitary barriers. Apple prices have strengthened and export volumes are forecast to recover by 2 percent in the 93/94 season.

A smaller California grape crop in 1993 pushed exports down 15 percent in volume and 6 percent in value. Exports to the EC in particular were hard hit. Like apples, a turnaround in exports is expected, with export volumes expected to recover to levels of two years ago. One bright spot in the grape situation was provided when Mexico announced in September of this year that it would issue import licenses for U.S. grapes.

U.S. cherry and stonefruit export markets could also stage a comeback in the volume of exports next year if recoveries in production allow U.S. stonefruit to regain some price competitiveness with foreign supplies and if phytosanitary access to the Mexican market can be expanded and made more certain.

In the dried fruit and processed fruit sectors, trade volumes eased during FY93 for raisins, prunes and most processed fruit products other than juices, while prices appear to have kept pace with the general level of inflation. Lower production of raisins and sultanas in Greece, Australia, South Africa and Mexico during 1993 is expected to boost export volumes and values for U.S. exporters by about 2 percent in the August 1993/July 1994 marketing season.

The fresh vegetable sector enjoyed a banner year in FY93 with solid increases in export volumes and values for lettuce, tomatoes, broccoli and asparagus. Increasing access to the NAFTA markets - Canada and Mexico - was the major plus factor, as well as wet summer weather in Japan that adversely affected summer vegetable production. This sector promises to offer more favorable export prospects in the future with the recent passage of the NAFTA agreement in the U.S. Congress.

Processed vegetable exports also performed strongly in FY93, mainly on the basis of frozen french fry and canned sweet corn shipments. In contrast to fresh vegetables, most of the export growth for processed vegetables is offshore. Eighty-five percent of frozen french fry exports went to Asia in FY 93 and the largest percentage gains by region were registered for Oceania and South America. In the canned sweet corn market, Asia and Western Europe remained the major export outlets and also contributed strongly to the increased level of exports.

III. Near Term Outlook for Geographic and Policy Developments

While commodity supply and demand factors are a critical factor in determining export potentials for fruits and vegetables, they are often influenced - some even would say "managed" - by policy decisions and geopolitical trends that are carefully considered through either public debate or government to government negotiations. When gazing into the future for fruit and vegetable trade, it is also useful to assess how changes in demographics, consumer demand and trade and production policies may affect international trade flows.

Canada

Canada remains by far the largest market for U.S. fruit and vegetable exporters and its growth in recent years has been due in large part to the Free Trade Agreement which has been in effect since 1989. Technical standards are still a problem, however, with both fresh and processed fruit and vegetable exports to Canada. On the fresh side, Canada still prohibits international, as well as interprovincial, shipments of bulk fruits and vegetables. As for processed products, U.S. sales to food service customers have been constrained by package size limits, only recently raised from 2 kg. to 20 kg., and mandatory internal labeling of bulk packaged items.

Mexico

The NAFTA's recent passage in the U.S. Congress not only opens up the U.S. market, over the next 15 years, to greater competition from Mexico, it also will help sustain the growth of U.S. fruit and vegetable exports experienced during the past several years. While phytosanitary and other technical problems are not completely resolved on all fruits and vegetables going into Mexico, the level of trade has soared to the point where Mexico is now our fifth largest horticultural export market, versus its number seven position only two years ago. With the implementation NAFTA's Schedule A tariff cuts in 1994, numerous U.S. fruits and vegetables will be able to enter Mexico duty-free, including smaller sized onions and shallots; seasonal shipments of head lettuce (June 1-October 31), grapes (October 15-May 31) and cherry tomatoes (December 1-April 30; peppers; garlic; tomato juice and strawberries, among others. Duties on these items during 1993 ranged from 10 to 20 percent.

European Community

The European Community's movements toward a unified market during 1993 appear, at least on the technical side, to have been positive for U.S. produce shippers. The Phytosanitary Directive implemented during the summer of 1993 has effectively opened up the Spanish apple and grapefruit markets to U.S. supplies and eased the points of entry for grapefruit into Italy. Due in part to production and export subsidies for certain processed products, the EC continues to be a major competitor of the United States in key world horticultural markets for apples, raisins, kiwifruit, canned peaches, a variety of processed fruit products, wine and processed potato products.

Japan

Japan continues to be our second largest export market despite the prolonged effects of its economic recession. For numerous fresh produce items, the Japanese market provides a significant price premium for extra quality which bolsters returns through the entire product range for U.S. producers. Things to watch for in the Japanese market during 1994 are our efforts to further reduce phytosanitary barriers to U.S. fruit, especially apples. FAS remains hopeful that 1994 crop Red and Golden Delicious apples from Washington State will be approved for importation into Japan.

China

While China is not currently a major market for U.S. fruits and vegetables, it may offer much better export prospects in the future if its sizzling rate of economic growth continues and if some prohibitive phytosanitary regulations and tariff rates can be reduced. South China, ethnically quite similar to the very lucrative Hong Kong market, could develop into a major importer of apples, grapes, stonefruit and high quality oranges if the Chinese medfly ban, currently applied to all fruits from the U.S., could be lifted or at least dropped for production regions where medfly is not found. The Chinese market is already exerting its influence on U.S. exports to Hong Kong, where the trade estimates that 20 percent of U.S. fruit imports are re-exported to the People's Republic.

Other Asian Markets

Key developments continue to unfold at a fast pace in other Asian markets as well. In its bid to join the GATT, Taiwan is expected to eliminate some import quotas and cut tariffs on fresh and processed fruits and vegetables. As a result, U.S. exporters could face additional competition in that market, but imports can be expected to expand. Taiwan is expected to announce within the next several months its phytosanitary guidelines to protect against transmission of the codling moth from imported apples, pears and stonefruit. Recent discussions in Washington between Taiwan and U.S. authorities appear to have eased many of the technical concerns that were earlier feared to adversely affect the growing exports of these fruits to Taiwan.

South Korea is expected to announce in the spring of 1994 its timeframe to remove Balance of Payments quantitative import restrictions on oranges, apples, grapes, garlic and dried onion by 1997. In Thailand, plant quarantine officials are reviewing a proposed protocol that would allow U.S. citrus to enter that market. In Malaysia, the government recently announced unilateral import duty reductions on a variety of fresh fruits from 20 percent to 10 percent ad valorem. Other Southeast Asian countries may also lower duties on fresh and processed produce items as part of the Uruguay Round.

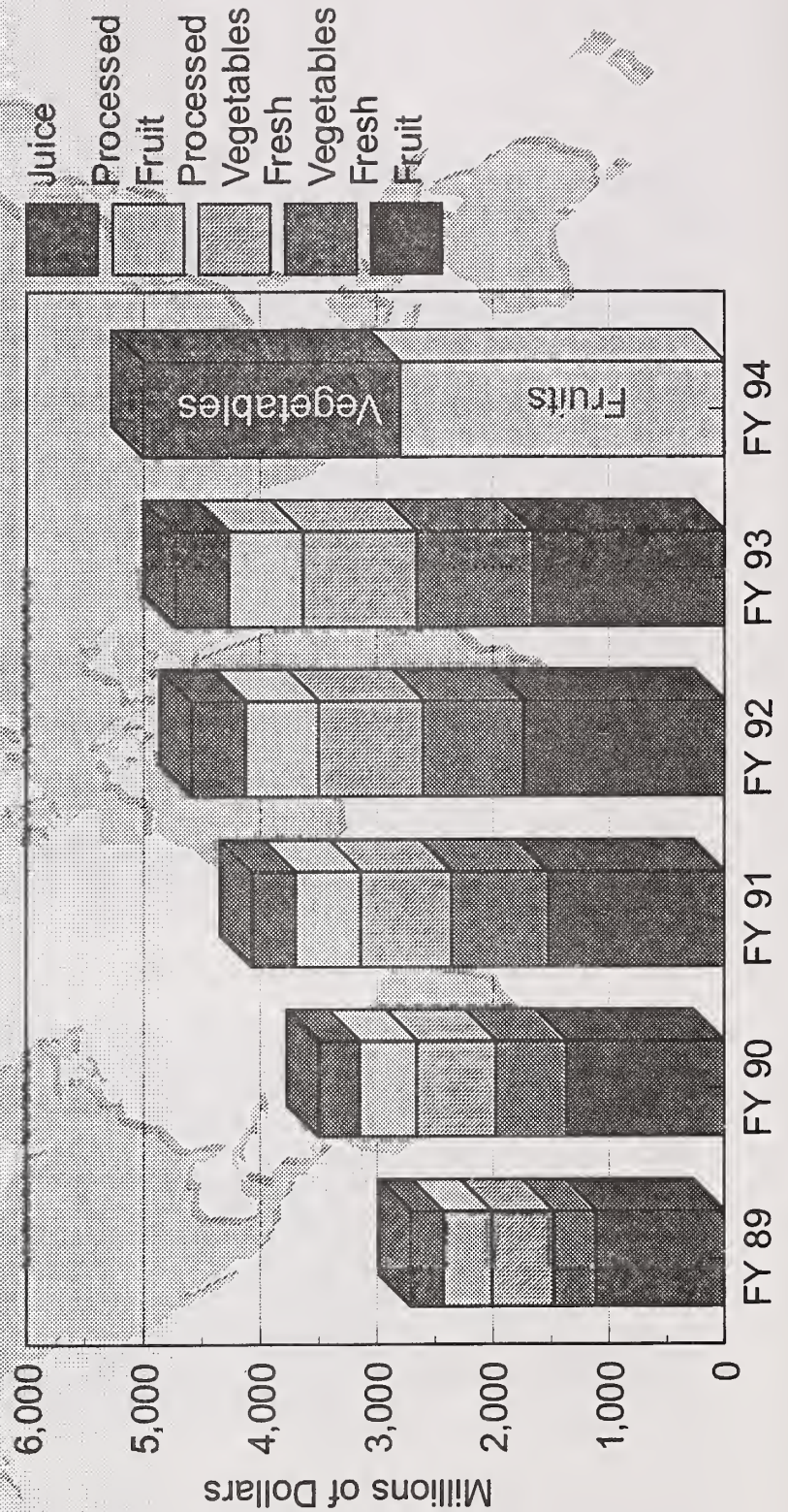
IV. In the More Distant Future

Looking into the future 5-10 years from now, it becomes even more difficult to pinpoint and accurately evaluate important influences and the effect they will have on world trade in fruits and vegetables. Among the most likely factors I would suggest are: (1) continuing efforts to liberalize trade, including the Uruguay Round, NAFTA, Andean Trade Initiative and the EFTA agreements on horticultural products between Eastern European countries and the EC, (2) ever-growing phytosanitary, food safety and other technical issues, including the use of methyl bromide and minor use pesticides, (3) growing competition from new or larger players on the world market, especially China and Southern Hemisphere countries, and (4) continuing economic growth around the world, with the accompanying tendency to improve the fruit and vegetable portion of one's diet.

It would appear that most of these factors will converge in a positive direction to further fuel the growth of fruit and vegetable trade worldwide, making this sector one of the brighter, more exciting spots on the agricultural map.

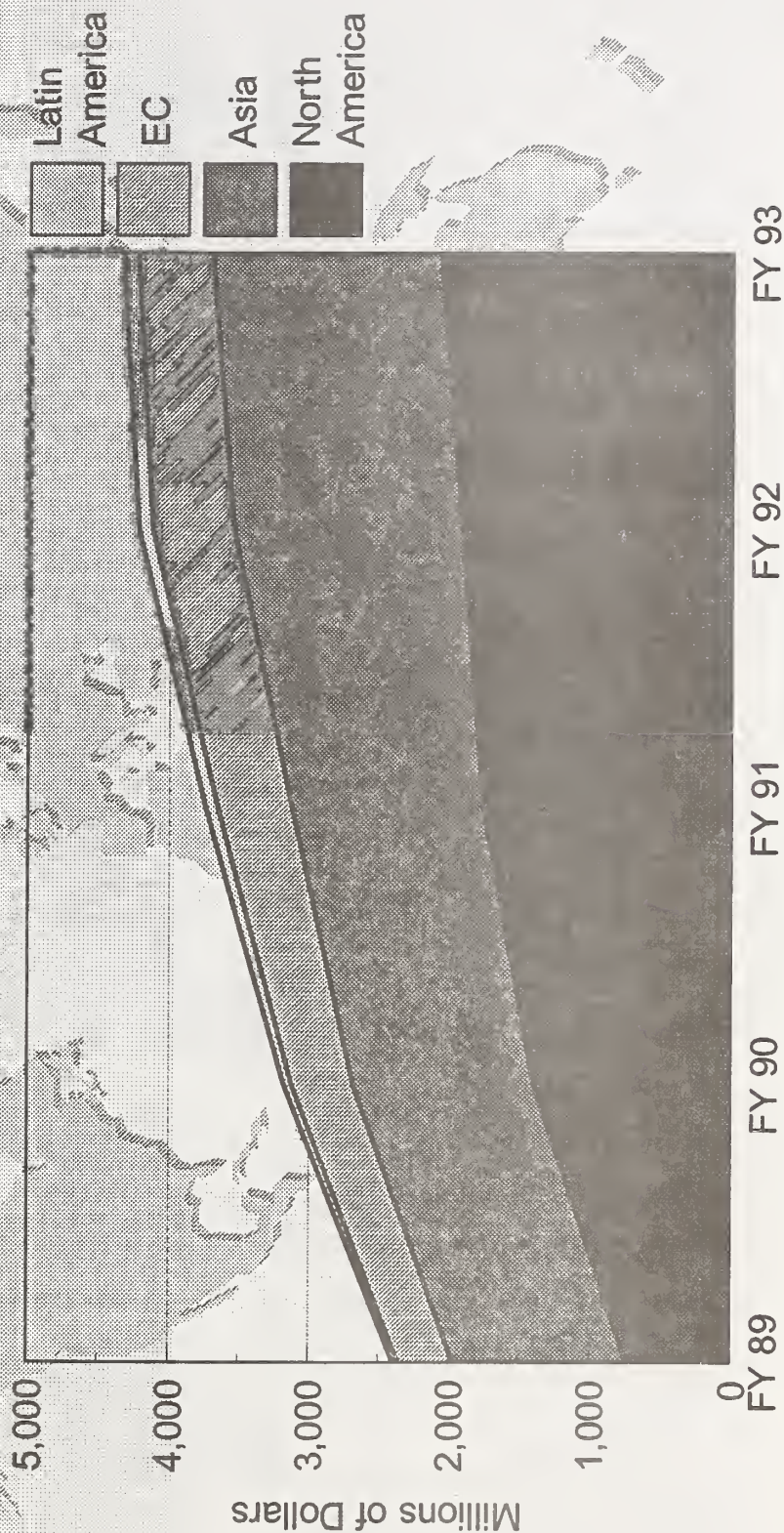
Exports of U.S. Fruits and Vegetables by Sector

FY 1989 - FY 1994 (Projected)

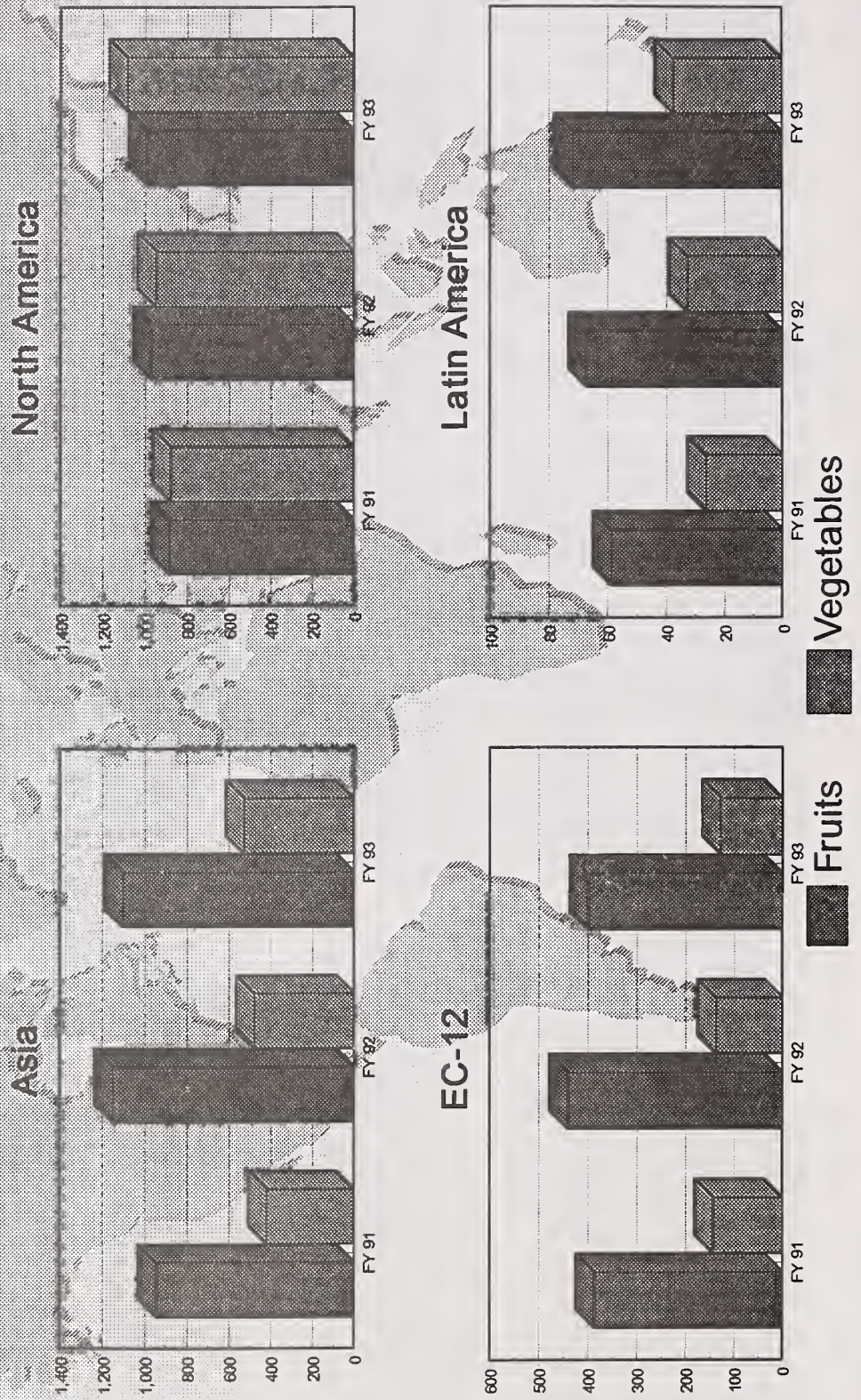


Exports of U.S. Fruits and Vegetables to Selected Regions

FY 89 - FY 93



Exports of Fruits Versus Vegetables to Selected Regions



Outlook '94

For Release: Wednesday, December 1, 1993

THE OUTLOOK FOR MINOR USE CHEMICALS AND THEIR ALTERNATIVES**Daniel A. Botts**Director, Environmental and Pest Management Division
Florida Fruit and Vegetable Association**I. Introduction**

I am pleased to be here this afternoon to represent the minor crop industry on a subject that has been at the forefront of the Florida Fruit and Vegetable Association's agenda over the past eight years: the availability of crop protection tools necessary for continued efficient and competitive production of healthy, high quality fruits and vegetables. Florida's sub-tropical climate, coupled with the diversity of minor crops produced results in an industry that is dependent upon the availability of effective crop protection strategies to remain viable. A major component of these strategies involves the use of agricultural chemicals.

Even though current control strategies rely upon agricultural chemicals to control key economically damaging pests, Florida crop production strategies also depend upon maximizing non-chemical options as well. Included in the overall management of all cropping systems are:

- Long term rotational considerations
- Fallow season - cultural and physical manipulations
- Selection of resistant plant varieties
- Plant nutrient management, and
- Intensive field monitoring and treatment based upon field data.

Into this framework of intensely managed crop production, the external factors of pricing, weather, and plain luck play a major part in the success of our industry.

Continued production is dependent upon a clearly defined, scientifically rational and user friendly process to make the continued availability of essential crop protection tools possible.

II. Historical Perspective

The major impediments to minor use crop protection tools are rooted in economics.

1. The base acreage of crops planted (potentially treated) is of insufficient size to represent a potential return on investments.
2. The intensity of management and long-term commitment of resources represents a major liability should a control option fail.

These two factors have been identified in every document published relative to the "minor use" problem and are not limited to agrichemicals. They also influence the development of resistant varieties, development of biological control agents, and non-toxic chemical alternatives such as pheromones and repellents.

While the problem has been easy to define, solutions have not been readily apparent. Additionally, the situation has become attenuated as EPA and the agricultural chemical industry have attempted to comply with the reregistration requirements included in the 1988 FIFRA reauthorization. Even though reregistration has resulted in the reduction of the number of available alternatives for use in minor crop production, it is extremely important to our industry that the process reach conclusion expeditiously. At the same time the credibility and integrity of the regulatory process must be reinforced.

As the minor use problem became focused in 1989/1990, many of us that represent similar interests came together to heighten awareness of the problem and to attempt to define solutions. The initial impetus and decision to organize was independently and simultaneously reached on three fronts: a loose coalition of regional horticultural trade associations, the American Farm Bureau Federation, and The National Association of State Departments of Agriculture. The resulting unified effort -- The Minor Crop Farmer Alliance -- was formed in 1991 and has worked continuously on minor use issues since that time. Current membership in the Alliance stands at over 140 national, regional, state, and local associations and companies involved in horticultural production or other "minor use" pesticide users.

The Alliance developed a list of incentives to ensure adequate consideration of minor uses as:

- The chemical industry decides which uses to register or reregister,
- EPA considers registration and reregistration actions, and
- USDA supports development of appropriate pest control options.

This set of incentives was developed into a package of legislation and introduced in both the 102nd and 103rd Congress. The bill entitled the Minor Crop Protection Assistance Act

(H.R. 967) was introduced in the House of Representatives by Agriculture Committee Chairman E. Kika de la Garza along with Representatives Roberts, Stenholm and Smith of Oregon as initial co-sponsors. The House bill currently has 123 co-sponsors. Senator Inouye and Senator Lugar introduced similar legislation (S. 985), and are joined by 41 Senate co-sponsors.

The effort behind the introduction of this legislation focused on the minor use issue and the regulatory impacts associated with the current regulatory process. The unfortunate outcome of elevating awareness of the issue is that it has become tied to the debate over total reform of FIFRA and FFDCA. The Alliance tried to separate the issues into a stand alone effort with abundant safeguards to prevent a tie-in to Food Safety. Every incentive proposed was based upon EPA's ability to determine that environmental or health risk associated with implementation of any of the actions requested were minimal or non-existent.

III. Current Situation

The ongoing discussions within the Administration and with the subcommittee on Department Operations and Nutrition, House Agriculture Committee has resulted in the MCFA package currently being stalled as a stand alone legislative package. However, we were gratified that the Administration understands the urgency of the situation and will work to include appropriate minor use language in the package currently being drafted. We look forward to working with USDA, EPA and FDA as the Administration proposal is finalized for introduction.

Several ongoing programs within the current USDA Research and Support Agenda also are critically important as future impacts of reregistration and the lack of new production registrations continue to occur. Among these are the IR-4 Program and the National Agricultural Pesticide Impact Assessment Program. At the grower level, these two programs are the ones most identified with USDA's pesticide program involvement. The minor use industry supports expansion of these efforts. We also support an expanded outreach and technology transfer program to ensure that the fruits of USDA's extensive basic research programs reach the hands of growers as quickly as possible.

Other initiatives at the Federal level bode well for implementation of many non-chemical alternatives such as: EPA's Reduced Risk Pesticide Program, emphasis on Integrated Pest Management, and the short turn around of plant variety development through biotechnology. However, each of these programs must be brought on-line after careful consideration of the impact on current production systems. Change is inevitable in biological systems, such as crop protection, but careful reasoned change is the most successful.

IV. Conclusions

The fruit and vegetable industry is facing one of the most challenging periods of its existence. As the final impacts of reregistration and new initiatives by USDA, EPA and FDA are felt in the industry, the outlook for minor use pesticides and their alternatives can be bright,

if:

- USDA, EPA and FDA work to understand the complexity of minor crop production;
- The traditional and non-traditional crop protection industries involve the agricultural production industry early in product development;
- The minor crop industry remains open to all pest control options; and
- The minor crop production industry continues to be actively involved in the decision process at all levels.

Outlook '94

For Release: Wednesday, December 1, 1993

OUTLOOK FOR U.S. TOBACCO

Verner N. Grise
Agricultural Economist
Economic Research Service
U.S. Department of Agriculture

The outlook for U.S.-grown tobacco during the remainder of the 1990's is pessimistic. Cigarette production and leaf exports will likely fall. Consequently, leaf production could decline considerably throughout the 1990's decade.

The outlook for the next several years is for U.S. cigarette consumption to fall. The amount of the decline depends importantly on how much cigarette taxes are increased. In addition to likely increases in taxes, other factors are reducing U.S. cigarette consumption. Social acceptance of cigarette smoking is waning, publicity about relationships between smoking and health are increasing, and restrictions on smoking in public places continue to grow.

After tripling from 1986 to 1992, cigarette exports are likely to start declining. The likely decline stems from the desire within many countries to produce cigarettes internally and to move U.S. cigarette exports to offshore production locations. The incentive to move cigarette production offshore was intensified when legislation was enacted in August to limit to 25 percent the foreign-grown content of leaf and stems used in cigarettes produced within the United States.

U.S. leaf exports are also likely to fall during the next several years. A number of countries have sharply increased production of leaf. World supplies of leaf are large and much of it is lower-priced than U.S.-grown leaf. Many countries are improving the quality of leaf they grow and technological developments have reduced leaf quality requirements to produce a good quality cigarette. This, together with the trend to cheaper cigarettes worldwide, hurts the U.S. competitive position that relies strongly on higher quality but higher priced leaf.

The U.S. tobacco outlook for 1993/94 is highlighted by excessive domestic supplies when compared with prospective use. Compared with a year earlier, flue-cured prices averaged 4 cents a pound lower and burley prices may also weaken. The weaker prices result from uncertainty about how much the Federal excise tax may increase and a lower quality flue-cured crop.

After falling a little in 1992/93, use may fall again in 1993/94. U.S. production in 1993 is down 7 percent from last year. Despite lower production, higher carryin stocks increased supplies about 1 percent to 3.9 billion pounds, with an increase in burley and several other kinds more than offsetting a decline in flue-cured.

The 1994 crop will almost surely be down. USDA must announce flue-cured quotas by December 15, burley quotas by February 1, and other kinds by March 1. Because of weak demand and large loan holdings, both the burley and flue-cured quotas will likely be lowered 10 percent in 1994, the maximum permitted by law. Allotments for other kinds may also decline because of uncertainty about how much Federal taxes on cigars, smoking tobacco, snuff, and chewing tobacco may increase. The weak prices of 1993 will likely continue into 1994.

U.S. Cigarette Sales Falling, Export Growth Ending

Cigarettes are the dominant product of the tobacco industry in the United States and most other countries. With an anticipated decline in both domestic consumption and exports, U.S. output will likely decline from the 718 billion in 1992. Consumption per person 18 and over may drop by 64 cigarettes (4 packs of 20) from 2,640 to 2,576. This would be the lowest consumption since 1941 and 41 percent below the 1963 peak. During the 1970's cigarette smokers shifted toward low-tar brands. However, there was a reversal after 1980. From 1981 to 1985 the low-tar proportion (15 milligrams of tar or less) fell from 60 to 52 percent of domestic sales, but it has since returned to nearly 60 percent of the total.

Despite an increase in the smoking age population, total consumption of cigarettes is likely to decline again in 1994 and per capita consumption is also likely to decline. The primary reason for the expected decline is anticipated tax increases. Under the Administration's proposed health care reform Health Security Act, Federal excise taxes would increase 75 cents to 99 cents a pack of 20. In 1993, fourteen States and the District of Columbia raised taxes an average of 10.8 cents per pack. State taxes now vary from 2.5 cents a pack in Virginia to 65 cents in the District of Columbia. Many cities and other local governments also tax cigarettes, and four-fifths of the States now impose sales taxes on cigarettes.

Retail prices of tobacco products were about 5 percent lower in October than a year earlier. Retail prices fell 9 percent from July to October. Manufacturers raised prices three times during the last year before reducing premium branded prices sharply in early August. Because of rapid gains in sales of discount brands, a manufacturer effectively lowered the price of a major premium brand through coupon and promotion activities in April. Also, manufacturers announced in April that further wholesale price increases for premium-branded cigarettes would be delayed. Due to the success of the lower priced major premium-branded cigarette in gaining market share and the continued overall rapid shift to discount brand cigarettes, manufacturers lowered the price of premium-branded cigarettes more than 25 percent in early August. The decline in U.S. cigarette consumption is being cushioned by reduced cigarette prices.

Publicity about the alleged adverse effects of smoking on nonsmokers is especially detrimental to the image of cigarette smoking. Secondhand or passive smoking has received much attention after the Environmental Protection Agency (EPA) released a risk assessment report entitled, "Respiratory Health Effects of Passive Smoking: Lung Cancer and Other Disorders" in January 1993. According to the report, "smoking is not just a health hazard for smokers but a significant risk for nonsmokers, particularly children." The report has spawned an increasing number of restrictions on smoking in public places and has reduced public opposition to higher cigarette taxes.

Changes in Tobacco Use Per Cigarette Affects Total Use

Tobacco use in cigarettes remained relatively constant during the 1970's and in 1980 and 1981, despite the gain in cigarette output. For many years, manufacturers could economize in leaf use as they shifted to filtertip brands and used the whole leaf. Later, manufacturers began using various leaf expansion processes and in recent years have used cheaper imported tobacco in blends. With cigarette production

declines from 1981 to 1986, total leaf use fell, but production hikes in 1987 and 1988 boosted leaf use. Leaf use fell in 1989, but rose during the next 3 years.

U.S. cigarette manufacturers used an estimated 1,280 million pounds of tobacco (unstemmed processing weight) in cigarettes in 1992. This was above a year earlier because cigarette production rose. This calendar year, with cigarette production down, leaf use will likely decline.

Manufacturers used an estimated 1.78 pounds of tobacco (unstemmed processing weight) per 1,000 cigarettes produced in 1992, virtually the same as the year earlier, but considerably below 15 to 20 years ago. Domestic flue-cured accounted for 32 percent, burley 26 percent, and Maryland 1 percent. Foreign-grown was 41 percent; twenty years earlier it was 15 percent.

Foreign Content Legislation

A provision in the Omnibus Budget Reconciliation Act of 1993 requires that U.S. manufactured cigarettes contain at least 75 percent U.S.-grown tobacco. Key provisions include:

- A requirement that U.S. cigarette manufacturers use at least 75 percent U.S.-grown tobacco during each calendar year in producing cigarettes. The provision applies to all cigarettes manufactured in the United States, whether for domestic consumption or export.
- The domestic content percentage level can be temporarily reduced below 75 percent if the Secretary of Agriculture determines that certain natural disasters have reduced domestic tobacco production.
- Manufacturers who use less than 75 percent U.S.-produced tobacco, or fail to certify the percentage of U.S. grown tobacco used, will be subject to a marketing assessment penalty equivalent to what the manufacturer would have paid for U.S.-grown tobacco.
- Manufacturers who violate the law also must purchase one-half pound of flue-cured and one-half pound of burley from the loan associations for each pound of imported tobacco they used in excess of the maximum 25 percent permitted by law. Failure to purchase the required amounts of flue-cured and burley from the associations would result in a penalty equal to the purchase short fall times 75 percent of the average market price of the tobacco. To insure the stability of flue-cured and burley pool inventories, the penalty will be waived if the inventories fall below the reserve stock level.

In addition to the minimum-content requirement, the new legislation imposes a budget-deficit assessment and a no-net-cost assessment on importers (the rate for the budget deficit assessment is the same as for purchasers of domestic leaf and the rate for the no-net-cost assessment is equal to the combined rates of fees collected from producers and purchasers of U.S. grown flue-cured and burley leaf). Also, fees for inspecting all imported tobacco will be comparable to fees and charges fixed and collected for services provided in connection with tobacco produced in the United States.

U.S. growers and purchasers of domestic leaf have paid special assessments equal to 1 percent of the average price support since 1991 to help reduce the Federal budget deficit. The new budget deficit assessment on importers applies to the 1994-98 crops and applies to all tobacco imported, including Oriental. Failure to remit the budget deficit fee will result in a penalty equal to 37.5 percent of the sum of the average price of flue-cured and burley tobacco for the immediately preceding year on the quantity of tobacco on which the failure occurs.

The no-net-cost assessments cover projected losses in operating the tobacco price-support program. U.S. flue-cured and burley growers have paid no-net-cost fees since 1982, while purchasers have paid the fees on U.S.-grown tobacco since 1986. Beginning in 1994, no-net-cost assessments will be levied on importers of flue-cured and burley tobacco. Noncompliance by importers to no-net-cost assessments results in a penalty equal to 75 percent of the average market price of the tobacco involved for the preceding year times the quantity of tobacco on which the failure occurs.

Consumption of Other Products Mixed

Consumption of large cigars will likely decline about 3 percent to 2.2 billion in 1993. Production of little cigars--less than 3 pounds per thousand--may fall after rising for three straight years. Large cigar consumption in 1994 is expected to continue the decline that started in 1970. Smoking tobacco consumption continues to fall to record lows annually.

Snuff consumption will likely increase for the sixth straight year in 1993. Moist use is rising, but dry use continues to decline. Chewing consumption will be down.

The recent rise in snuff consumption probably results from substitution of this product because of increased smoking restrictions. Snuff consumption may rise again in 1994, but consumption of snuff, chewing tobacco, smoking tobacco and cigars depend on whether or how much Federal excise taxes increase. The Administration's proposed Health Security Act would increase Federal excise taxes dramatically for these products.

U.S. Tobacco Crop Smaller

Tobacco production is down this year in the United States because acreage and yields are lower. Marketing quotas were reduced and dry weather and disease reduced yields. Despite higher price supports, the poorer quality crop and weak demand lowered average flue-cured auction prices nearly 4 cents a pound from a year earlier. Combined with smaller marketings, flue-cured cash receipts from the 1993 crop were down about 3 percent. Production costs were higher, but the combined no-net-cost and marketing assessment for growers was unchanged from the 1 cent a pound assessment of a year earlier.

As of November 1, the tobacco crop was forecast at 1.61 billion pounds, down about 7 percent from the year earlier. Total supplies for the 1992/93 marketing year are up about 3 percent because larger carryin more than offsets smaller production.

Price supports for all kinds of tobacco are higher this season. Burley auctions opened November 22. This season's prices may average lower than a year earlier. Cash receipts for the 1993 burley crop may decline about 10 percent.

As of September 1, grower cooperatives held about 308 million pounds of tobacco (farm sales weight and excluding 1993 flue-cured receipts), up about 15 percent or 40 million pounds from a year earlier. Unsold loan stocks of 278 million pounds were up about 32 percent from a year earlier. Sales of old-crop loan stocks have declined because of weak demand.

The flue-cured auction season ended on November 16 with prices averaging \$1.688, about 3.9 cents below a year earlier. About 206 million pounds was placed under loan; about 150 percent above a year earlier and the largest in 11 years.

Government price support is mandatory for tobacco produced under marketing quotas. Support levels for 1994 have not been set although preliminary figures indicate the flue-cured support will increase 0.5 to 0.8 cents a pound.

Flue-cured and burley price supports are the level for the preceding year adjusted by changes in a 5-year moving average of prices (two-thirds weight) and changes in the cost of production index (one-third weight). Costs include general variable expenditures, but exclude costs of land, quota, risk, overhead, management, marketing contributions, and other costs not directly related to the production of tobacco.

Marketings for the 1993 flue-cured crop and unsold 1992 production were about 1 percent below last year's marketings. Together with a smaller carryover, flue-cured supplies for 1993/94 are about 2-percent below last season. The flue-cured effective quota was 1 percent lower this year. Because of excess production in 1992, 55 to 60 million pounds of 1992 crop tobacco were sold in 1993. Some growers have tobacco in excess of their penalty free quota (103 percent of the effective quota can be marketed without penalty) this year to carry into the 1994 season.

Under the acreage-poundage program, USDA is required to announce the national marketing quota for the 1994 crop of flue-cured tobacco by December 15, 1993. The 1993 basic quota was 892 million pounds, above prospective use. After rising last year, supplies are down this season, but still represent 2.6 years prospective use. Because this season's marketings are near 1993's effective quota, the effective quota for 1994 will be near the basic quota.

Supplies of burley tobacco are up this season for the second consecutive year. Supplies represent about 2.7 year's use. The 1993/94 supply of burley tobacco is about 5 percent above last season.

Carryover burley stocks on October 1 were 16 percent above a year earlier because use fell 11 percent from last year. Acreage is down 10 percent and yields are down 1 percent.

Last season, disappearance of flue-cured tobacco totaled 929 million pounds, about 6 percent higher than the previous year. Both domestic use and exports rose. The 8 percent increase in domestic disappearance reflected stable cigarette production and some rebound in use following last season's big drop. With lower cigarette production, domestic disappearance during 1993/94 will likely fall.

With large world supplies and this year's poor quality flue-cured crop, exports will likely decline. Furthermore, U.S. exports are hampered by stagnant or declining cigarette consumption in major importing countries and potential retaliation by importers because of U.S. restrictions on foreign leaf use in U.S. produced cigarettes.

During the year ending September 30, 1993, burley disappearance totaled 572 million pounds, 11 percent below the previous year. Both domestic use and exports were down. Domestic use was down because of substitution of imported leaf and stems for domestic leaf. Exports were down because of abundant world supplies; much at lower prices than in the United States.

Total use of burley may rebound a little in 1993/94. Domestic use may rise enough to more than offset the likely decline in exports.

For both flue-cured and burley tobacco, legislation requires that the national quota be based on:

- 1) intended purchases by cigarette manufacturers;
- 2) average annual exports for the 3 preceding years;

- 3) the amount of tobacco needed to attain the specified reserve stock level (15 percent of the basic quota). USDA's discretion for setting the quota is limited to no more than 103 percent or less than 97 percent of the amount determined by manufacturer's needs and exports, and the reserve stock level. Any quota reduction is limited to a maximum of 10 percent in 1994.

With the uncertainty about the excise tax question, the flue-cured and burley quotas will almost surely fall 10 percent in 1994. Without the 10 percent maximum decline provision, the quota would decline even more. Large producer association stocks mean that 1995 quotas will likely fall by an even greater amount. Quotas can decline more than 10 percent if loan stocks exceed 150 percent of the reserve stock level, which is extremely likely in 1995.

Among other types of tobacco, supplies of Maryland, dark air-cured, cigar filler, and cigar binder are down. Supplies of dark fire-cured and cigar wrapper are up.

Producer referendums will be held in early 1994 to determine if growers of dark fire-cured (types 21-23) and dark air-cured (types 35-36) desire acreage allotments for the next three crops. Producers of flue-cured, burley, Virginia sun-cured, Ohio cigar filler and Wisconsin cigar binder (types 42-44 and types 54-55), and Puerto Rican cigar filler (type 46) approved marketing quotas in previous referenda. Maryland, Pennsylvania filler (type 41) and Connecticut binder (types 51-52) voted against quotas in previous referenda.

A Look Ahead

U.S. tobacco production in 1994 will decline from last year's lower level. Further declines in production are projected for future years. The fall in U.S. tobacco production during the next several years results from anticipated jumps in the Federal excise tax and considerable movement of cigarette production offshore with small proportions of U.S. grown leaf used. In addition, the U.S. industry faces stiff competition from foreign tobacco growers in supplying world leaf requirements. Too, restrictions on where people can smoke and declining social acceptability of smoking in the United States and other countries is reducing consumption.

Outlook '94

For Release: Wednesday, December 1, 1993

**U.S. TOBACCO OUTLOOK FROM ONE
CIGARETTE MANUFACTURER'S PERSPECTIVE**

Murray W. Jones
Director, Government Relations
R. J. Reynolds Tobacco Company

Thank you for inviting me here today. Please note that I will be attempting to address this topic today from a single manufacturer's viewpoint. How many times have you heard a tobacco person begin by saying, "Now I can't speak for the rest of the industry . . ." Well unfortunately, such is still the case today.

I want to touch on some of the current issues facing the tobacco industry today, but I also want to look back at past "tobacco battles" and see if we can learn anything from our successes and/or failures. And finally, I want to pull out my trusty crystal ball and take a look at the future of tobacco.

Looking Back

I remember vividly in 1983 when the federal excise tax on cigarettes was doubled -- from 8 cents a pack to 16 cents. In the Senate, we had first tried to defeat the proposed increase and lost big; Sen. Thurmond next offered an amendment to share the tax burden with alcohol (sound familiar?) -- that amendment was defeated on a procedural vote; we finally prevailed on an obscure measure to sunset the tax after a couple of years. At the time, little did we know how valuable that "sunset" bargaining chip would become in the buyout legislation of 1985-86.

The next tax battle occurred in 1990. We managed to survive with an increase of eight cents -- spread over 3 years: 4 cents in 1991, zero in 1992, and another 4 cents in 1993 -- to its current level of 24 cents. I don't mean to drag up past tax increases, but I only want to put today's "monster" proposals into perspective. Since 1952, the FET has been

increased in three increments: 8 cents, 4 cents, and 4 cents; this history makes the current proposed increases of 75 cents, one dollar, and two dollars look even more outrageous.

Another example -- remember back in 1987, 1988, and 1989 the huge battle over the airline smoking ban. A two-year "temporary" ban was enacted in '87 to begin in '88; a permanent ban was passed in '89 even before the trial period had expired. For a number of years, the airline smoking ban was the anti-tobacco groups' biggest victory over the "powerful" tobacco lobby. We at RJR adamantly opposed the airline smoking ban, but probably more for the precedent it set than for the actual cigarette volume lost from smoking fliers not being able to light up. Again, this was the first major "place" where the anti's were successful in banning smoking.

Contrast the airline smoking ban with a bill recently introduced by Congressman Henry Waxman and Senator Frank Lautenberg entitled the "Smoke-Free Environment Act of 1993." This proposed legislation would ban smoking in all "public buildings" nationwide, except in designated smoking areas that have a separate ventilation system. They define a public building as spaces regularly entered by 10 or more people at least once a week. Talk about going from a "foot in the door" with the airline smoking ban to basically an effective smoking ban anywhere outside the home.

Current Issues

Enough on the past; let me move on to current issues. In addition to the Waxman/Lautenberg legislation, Congressman Jim Traficant is trying to ban smoking in all federal buildings. With its risk assessment on environmental tobacco smoke, or ETS, it seems the Environmental Protection Agency is trying to end exposure to all tobacco smoke -- both direct and the so-called passive smoke. All of you know the extreme significance of the ETS issue and the current court challenge; I will not dwell further on this subject. While most of my talk today will center around federal issues, you can rest assured the states and localities are constantly chipping away at us -- more so every day; unfortunately, time will not permit me to stray very far from federal problems this time.

In talking about the current issues of most importance, I have come up with my list of the "Big Three":

1. proposed FET increase
2. price war
3. domestic content law

#1: FET Increase

The first of my "Big Three" could do the greatest harm to the tobacco industry. It even has the potential to destroy or effectively cripple this proud and honorable tobacco tradition. I am speaking about the "monster" cigarette taxes being proposed to fund the Administration's plan to reform health care.

Just in case anyone had any doubts how tobacco is regarded in the White House, consider the following news account. In a recent article on trading tobacco tax votes for NAFTA, President Clinton's congressional liaison on NAFTA said the cigarette tax was "just not in play at all." An even stronger sentiment was voiced by a White House spokesperson, "This is a very sensitive issue with Mrs. Clinton and lawmakers have to be very careful of running into her health care plan and her hatred of tobacco."

The first impact we in the cigarette industry would feel as a result of an increase in the excise tax would be in consumption; in simple terms, how many smokers would quit or cut back on their smoking patterns if the tax is raised? During testimony before the House Ways and Means Committee on health care financing, Treasury Secretary Lloyd Bentsen said U.S. cigarette consumption would drop 12% to 15% if the proposed 75 cents per pack tax increase was adopted.

Tobacco-state congressmen, cigarette company CEOs, farm group leaders, the Tobacco Institute, and seemingly every other source have been quoted giving the economic losses resulting from specific increases in the cigarette excise tax; you've heard many of them, dealing with direct and indirect losses -- jobs, taxes paid, income, etc. For the most talked about amount -- the 75-cent proposal in the Administration's health care proposal -- the economic losses are as follows: tobacco sector jobs (growing, manufacturing, wholesale/retail, and suppliers) = loss of 82,000 jobs with a payroll just under \$2 billion; expenditure-induced (ripple or multiplier effect) = loss of another 192,000 jobs with a payroll over \$6 billion.

We at RJR are following an issue right now which has to do with the "earmarking" of FET revenue to buy-up tobacco quotas or help farmers make the transition to alternative crops. We firmly believe that the entire tobacco community has to stay united behind the opposition to any and all excise tax increases. At this early date, we think it is extremely premature to decide where the tax money would go and how it would be spent; rather, we should all still concentrate on defeating the tax. The earmarking issue should be kept secondary at this point in time.

To oppose these excise tax increases, we are working with our elected representatives, growers, the other manufacturers, smokers, suppliers/vendors and anybody else with a stake in this important fight. We hope and trust that reason and sanity will prevail in the health care debate, but we are not stopping with that hope. We are doing everything we can at RJR to avoid any excise tax increase.

#2: The Price War

Tobacco companies, like any other company, owe it to their shareholders to be as profitable as possible. RJR is no exception. During the decade of the '80s, the tobacco industry built a very high level of shareholder value primarily by raising our prices as total industry volume declined. But high prices and high profit margins are very vulnerable in a declining product category, such as cigarettes. And during the '80s, tobacco companies began introducing savings brands, which offered price-conscious smokers cheaper alternatives.

Over the past few years, as significant numbers of smokers switched from full-price to savings brands, tobacco manufacturers began to increasingly offer special promotions on full-price brands -- such as offers for premium merchandise, "buy one, get one free" or discount coupons. I don't have to tell you that the pricing situation dramatically escalated on Friday, April 2, 1993 -- better known now as "Marlboro Friday."

As in most situations, I have good news and bad news. The bad news first: we have all lost a "boat load" of money in the process. Press estimates have put these losses at about \$4 billion for 1993. For the accountants and/or economists in the audience, we may actually be referring to reductions in anticipated profits rather than true losses; but from where I grew up, we're still talking about real money.

RJR Nabisco announced publicly that Reynolds Tobacco's 1993 business unit contribution (BUC) would be \$900 million lower than last year's -- almost entirely attributable to the price war. Philip Morris originally said their price reductions would cost them about \$2 billion. Just recently they came back and said that its domestic tobacco operating profits will fall by 45% or \$2.3 billion this year. Together with RJR's \$900 million, that's -\$3.2 billion for just PM and RJR; the rest of the industry could easily account for the \$4 billion loss -- or more.

And, last week Philip Morris Cos. announced plans to cut 14,000 jobs and shut down or reduce operations at 40 manufacturing plants and other operations over the next three years. Back in September, RJR announced plans to eliminate about 1,000 tobacco jobs; we are also looking for new ways to cut our operating expenses. In a price war, cost

reductions, operating efficiencies, and greater marketplace effectiveness are necessary if one is to survive.

I am normally an optimistic person by nature, but I had to really stretch to find good news resulting from the pricing reductions. Probably the most important is the slow-down in the move to lower-priced cigarettes. This is primarily due to a reduction in the price gap between full price and savings brands. A couple of years ago, that price gap had grown to 66 cents. By early '93, the gap had widened to 80 cents -- hence the greater incentive for smokers to trade down to cheaper smokes. The price war has reduced the gap to about 45 cents, and more smokers are now willing to pay the difference for a full-price brand.

The new prices and lower margins in no way, shape, or form spell "the beginning of the end" for the tobacco industry. There are still about 50 million adult smokers in this country. But the way we must compete has changed. To improve our profitability, we must find better ways to run our business; this is already happening.

#3: Domestic Content Law

I don't think there are any doubts about our company position on this issue, but I will restate some of the basics. We at RJR shared the growers' concern about the rising use of imported tobacco by U.S. cigarette manufacturers. And, we supported a strict limit on imported tobacco in cigarettes produced in this country for the domestic market; we felt it would have been a serious mistake to apply over-burdensome import restrictions to cigarettes produced in the U.S. for export to other countries.

As a result, RJR supported the "two-tier" domestic content approach (sometimes referred to as the 85/50 plan), with a stricter import limit on domestic cigarettes and a more manageable and competitive import restriction on export cigarettes. We felt that American leaf growers and American cigarette workers would have been better served by having as many cigarettes as possible produced in this country; this would have translated into more U.S. leaf in those cigarettes and more jobs at home.

You know the rest of this story; Congress enacted a 75-percent domestic content requirement for all cigarettes made in this country -- whether for domestic or export use -- and included oriental tobacco in the 25-percent limit. It seems our concerns and predictions fell on deaf ears. But as they often say here in Washington, reasonable minds may differ. We're big boys -- life goes on; only time will tell whether this domestic content law will prove to have been the right thing to do. Now all we can do is wait for the publishing of the proposed regulations.

Future

I lied at the beginning when I mentioned having the benefit of a crystal ball. But as for the future, we at RJR plan on remaining in the cigarette business for a long time to come.

Our goal is to lower costs, raise earnings, and profitably defend our market share. We will improve our profitability by finding the "least possible cost" of doing business while maintaining competitive strength in the marketplace. Improved earnings will set the stage for a stable future.

We intend to confront our industry's new challenges as an opportunity to become a stronger competitor, and to make our own luck. Obviously, we face some factors that are not in our control, but we are shaping our business to be well positioned to meet those challenges and opportunities.

Again, I appreciate your inviting me here today. I hope I have been able to shed at least some light on the tobacco outlook from one manufacturer's perspective.

Thank you.

Outlook '94

For Release: Wednesday, December 1, 1993

Outlook for Red Meat and Poultry

Steve Reed

Agricultural Economist, Commodity Economics Division
Economic Research Service**Overview**

Larger meat supplies are forecast for 1994 at slightly lower wholesale prices. Competition for the consumer dollar will increase as larger beef and broiler supplies provide retailers with ample product for featuring.

Consumer income gains in 1994 could be strongest since 1988, while inflation indexes are expected to remain moderate, averaging near 3 percent over the next several years. Unemployment will likely remain below 7 percent.

Interest rates are expected to remain near 1993 levels, but could move slightly higher with the improving economy. Short term rates could rise more than long term.

The outlook for U.S. meat trading partners is for modest improvement in 1994. Japan's economy should improve next year but remain sluggish. Growth in Canada could be stronger than in the United States, while Mexico's growth rate could be 4 percent or higher following the recent passage of NAFTA.

Lower Feed and Forage Supplies -- Higher Prices

This year's corn crop will fall nearly 3 billion bushels below last year's record, leading to rising feed costs and lower profit margins for most livestock and poultry producers. However, larger wheat stocks and substitution of other feeds will ensure adequate supplies. Concerns over grain quality continue and market uncertainties will lead to volatile prices that may continue into spring on any delays in planting. The farm price of corn is forecast to average \$2.35-\$2.75 per bushel during '93/'94 versus \$2.20 average for '92/'93. Prices could exceed \$3 per bushel at times.

Soybean meal prices are under less pressure than corn. Prices likely will remain about unchanged from a year earlier, trading near \$180 on 44% and \$190-\$195 on the 48% protein during first half of 1994.

Hay supplies could be limited and prices higher in some areas of the country this winter due to poor harvesting conditions and reduced harvests. Lower carry-over stocks from the '92 crop also will impact prices. Good quality alfalfa hay may be hard to come by later this winter, and prices already reflect quality problems in some areas.

Fall grazing prospects for cattle remain uncertain. Lack of moisture in the High Plains has limited wheat grazing potential. Drought in the Southeast that began this summer has left many areas unable to carry livestock at normal stocking rates.

Cattle Inventories Increase in 1994

The U.S. cattle inventory will continue to increase in 1994. Beginning inventories are forecast near 102 million head on January 1, versus 100.9 million at the beginning of 1993.

Beef cow inventories increased 2.5 percent from a year earlier in the mid-year survey on July 1, and likely will be up about the same percent on January 1, 1994. This will be the largest beef cow herd since 1985, and a continuation of the modest expansion phase of the cattle cycle which began in 1991.

Supplies of feeder cattle also will increase in 1994. This year's calf crop, estimated at 40.1 million head, was up about 2 percent from a year earlier. Next year's calf crop could be up another 1 million head.

Despite this year's larger calf crop, feeder cattle supplies outside feedlots on October 1 were down marginally. The number of heavier stocker cattle fell nearly 12 percent from the previous year and more than offset a 1 percent increase in calves. The sharp decline in yearling supplies was partially due to higher feedlot placements during the third quarter.

Fed Cattle Marketings Rise

Annual feedlot placements will drop slightly in 1993, due to weather related problems during the winter quarter that delayed marketing dates and slowed weight gains. The cattle feeding sector did not fully recover until the summer quarter.

Fed cattle marketings during the remainder of 1993 and well into the first half of 1994 are expected to increase sharply. Large feedlot placements during the summer quarter will push fourth and first quarter marketings up 5 and 4 percent, respectively, from a year earlier.

Beef Production Higher in 1994 - Prices Lower

Total fed cattle slaughter is forecast near 25.5 million head for 1993 and could increase to 26 million next year, the largest since 1989. With on feed inventories at the beginning of 1994 expected to be 3-4 percent higher, the largest increase in marketings will occur during the winter quarter. More modest increases in slaughter supplies are forecast for the remainder of 1994.

Larger fed cattle marketings at heavier weights already have caused prices to trade below last year. Fed steer prices in the High Plains were trading in the mid-\$70's during November, and are not expected to see much additional price strength until early in the spring quarter. And even then, prices likely will not return to the highs of 1993 when fed cattle averaged over \$80 during the spring quarter.

Commercial beef production will likely exceed 23 billion pounds in 1993, and reach nearly 23.9 billion pounds in 1994. The increase will come primarily from larger fed cattle supplies as cow slaughter is forecast to remain about unchanged to lower.

Per capita beef supplies are forecast to rise modestly in 1994 to 67.2 pounds, on a retail weight basis, versus 65.6 pounds this year.

Retail Beef Prices Decline From Record

Retail Choice beef prices hit a record last spring at \$3.04 per pound. Prices fell through the summer quarter as supplies expanded, and additional declines are forecast into 1994. For 1993, retail beef prices are forecast near \$2.93 per pound, but may average fully 10 cents per pound lower in 1994.

Beef Exports Increase

U.S. beef exports declined in 1993 due to slower growth in several Pacific Rim countries and the imposition of tariffs on shipments to Mexico. Annual exports are forecast near 1.3 billion pounds, down 2 percent from last year's record. Improving overseas economies are expected to result in higher imports in 1994, and the recent passage of NAFTA will eventually lead to the removal of Mexican tariffs. Korean imports also will increase in 1994 due to an increase in the minimum quota level.

Lower beef imports are forecast in 1994 as both Australia and New Zealand have indicated that herd rebuilding will limit slaughter inventories. Drought in Australia forced more animals to slaughter during the first half of the year and will result in lower shipments during 1994.

Live Cattle Imports Increasing

Mexican feeder cattle imports through September were up 53 percent from a year earlier. Live cattle shipments from Canada rose nearly 5 percent over the same period, with a growing proportion coming as fed animals headed to slaughter. Cattle imports from all sources are forecast near 2.65 million head in 1993, and could rise about 4 percent in 1994.

Lamb and Mutton Production Increase

Lamb and mutton production is expected to be larger in 1994 if wool incentive payments are reduced and fees on Federal grazing lands raised. Current expectations are that producers will cull more aggressively and limit the number

of lambs entering breeding flocks over the next several years if these two developments occur.

Lamb production during 1994 is expected to rise to 336 million pounds from this year's nearly 332 million. Slaughter lamb prices should range in the mid-\$60's per cwt for the remainder of 1993 on continued support at the wholesale level. Lamb carcasses have traded around \$140 per cwt since late August and should rise to \$145 on stronger holiday demand.

Lamb prices next year will remain volatile, with seasonal peaks expected in March during the weeks leading up to Easter and Passover. Prices during this period should average in the mid-\$70's before dropping off to the upper \$50's per cwt by the summer quarter. Tight feeder lamb supplies likely will continue to keep them trading at a premium to the slaughter market.

Pork Supplies Decline in 1994

Pork production is expected to decline through the first-half of 1994 as producers have been reducing breeding herds. September's Hogs and Pigs report was the third consecutive quarterly estimate showing a year-over-year reduction in the breeding herd. Market inventories were down 4 percent and the number kept for breeding was down 5 percent. Hog producers indicated intentions to have 3 percent fewer sows farrow in September-November than a year ago.

Hog slaughter and pork production are projected to be down 6 and 5 percent, respectively, during fourth-quarter 1993. And for the year, commercial pork production is expected to total about 16.8 billion pounds, down 2 percent from the 1992 record.

First-quarter 1994 slaughter and production are expected to decline about 3 percent, and second-quarter production could fall 1 percent from a year earlier.

Second-half 1994 slaughter and pork production are expected to increase 2-3 percent from 1993. Expectations are that the March-May 1994 pig crop, an indicator of fourth quarter slaughter, will be about 3 percent above a year ago. However, lower hog prices and higher feed costs could temper expansion plans. For all of 1994, commercial production is forecast at 16.9 billion pounds, less than 1 percent above 1993.

On a per capita basis, pork supplies will be about unchanged in 1994, at around 51.3 pounds, on a retail weight basis, versus 51.6 pounds this year.

Higher Pork Prices Expected Through Mid-1994

Despite the declines in production, Iowa-Southern Minnesota barrow and gilt prices have dropped into the lower-\$40's as the seasonal increase in pork production and increasing competing meat supplies pressure pork prices. For all of 1993, hog prices are expected to average \$46-\$47 per cwt, compared with \$43 last year.

Hog prices in 1994 are expected to average \$45-\$51 per cwt. Lower pork production in first-half 1994 will boost prices, especially early in the year. However, as production increases in second-half 1994, prices will drift below a year ago.

Retail pork prices are expected to rise 2-4 percent in 1994 over 1993, as the farm-retail spreads post year-over-year gains and return to pre-1992 levels. Pork product prices are expected to be less favorably priced relative to beef in 1994, thus, fewer pork features are likely, letting farm-retail spreads rise.

Pork Imports Remain Strong

U.S. pork imports were 9 percent higher through September compared to a year earlier. Imports from Canada were about unchanged, while shipments from Denmark were 29 percent higher than in 1992. Imports from other EC countries also are up sharply this year. Larger EC production began in 1992 in response to shortages in eastern block countries of the former Soviet Union. Larger production continued into 1993, with a growing proportion now entering the United States.

Imports are expected to increase about 3 percent in 1994. Despite expectations of lower Canadian production, imports from Canada could be stronger as the spread between U.S. and Canadian prices widens.

Imports of live hogs from Canada were up about 29 percent in the first 9 months of 1993. Feeder pig imports represent about one-third of the level of imports from Canada.

Pork Exports Remain Weak

Pork exports to Japan and Mexico will likely remain weak through the end of the year, and the outlook for 1994 is not much better. The Japanese economy likely will remain weak and pressure from Denmark could limit U.S. sales. Mexican imports will likely increase, but there is considerable uncertainty as to whether the Mexican Government will impose anti-dumping duties on U.S. hogs and pork in addition to the current 20 percent tariff.

Broiler Growth Expected at 5 Percent in 1994

Broiler production will continue at record levels through 1994. Total ready-to-cook broiler production is forecast to exceed 23 billion pounds next year as producers respond to favorable returns in 1993. This will be the 19th consecutive year of production increases.

Average wholesale prices for whole birds have traded higher during most of 1993, but the gap began narrowing in October. Fourth-quarter prices will average 52-56 cents a pound, slightly above last year. For the year, prices for whole birds are expected to average in the mid-50's and trade 1-2 cents per pound lower in 1994.

Both the price of whole birds and leg quarters, the primary export product, reflect the strength in the export markets. Leg quarter prices have increased about 17 percent since late summer and currently are selling near 28 cents per pound. Chicken breast meat, which is not a major export item, has declined from the summer quarter and is trading below a year earlier.

Retail prices for whole broilers have been stable in 1993, averaging 88-89 cents a pound, 1 cent higher than last year. Little change in retail prices is expected in 1994. Per capita broiler consumption is expected to reach 69 pounds in 1993 on a retail weight basis, and 71-72 pounds in 1994.

Broiler Net Returns Strong

Net returns to broiler producers, on a whole bird basis, were nearly double those of last year. Positive returns are expected in 1994 as well, but likely will be several cents lower, reflecting lower wholesale broiler prices and higher feed costs.

U.S. Broiler Exports at Record Levels

U.S. broiler exports will increase about 22 percent in 1993, to over 1.8 billion pounds. This is the most rapid increase since 1990's 40 percent increase. Shipments to Hong Kong, Mexico, Eastern Europe, the Pacific Rim, and the Middle East are leading the growth. Exports in 1994 are expected to increase to around 1.9 billion pounds.

Low prices of U.S. broiler leg parts are the principal force driving U.S. export growth. About 96 percent of the exports are broiler parts. Whole bird exports for 1993 will likely total only about 70 million pounds, and over half are exported to Mexico and Canada.

Sales of U.S. whole birds under the Export Enhancement Program (EEP) have fallen this year. For the first 10 months of this year, EEP sales totalled 18.4 million pounds, versus 25.5 million pounds last year. EEP was established to compete with subsidized exports from the European Community (EC).

Turkey Profitability Returned in 1993

Net returns to turkey producers were the highest since 1986, due to a combination of higher turkey prices and lower feed costs during much of the year. Fourth-quarter returns are expected at 5-7 cents per pound, and likely will average near 2 cents for 1993.

Turkey production increased less than 1 percent in 1993, following a 4-percent rise in 1992. Higher turkey prices and more favorable returns in second-half 1993 will encourage about a 2-percent increase in production next year.

In early 1994, higher feed costs will add about 2-2.5 cents per pound to production costs. And while first-quarter 1994 turkey prices are expected to be higher than a year earlier, they may not be high enough to offset increased costs.

Turkey prices for all of 1994 are expected to average 59-65 cents per pound, compared with 62-63 cents in 1993.

Sharp Growth in Turkey Exports

Turkey exports are expected to increase nearly 25 percent in 1993 to about 210 million pounds, equal to nearly 5 percent of production. This proportion has risen steadily in recent years as demand for relatively low-priced turkey meat parts has increased. Leg parts continue as the main export, accounting for about 96 percent of total exports this year.

Mexico remains the major market for U.S. turkey exports, taking about 70 percent through September. Turkey production and consumption in Mexico remains very low, but consumption has increased four-fold since 1990 to an estimated 1.6 pounds per person in 1993.

U.S. turkey exports in 1994 are expected to rise to 225-230 million pounds as prices are expected to remain competitive in international markets.

Egg Production Increases Could Pressure Prices

Total egg production in 1993 will be over 5.9 billion dozen, a 1-percent increase from 1992. Hatching egg production is expected to increase more than 2 percent, while table egg production will be up 1 percent, the largest since 1988.

The table egg flock is expected to remain large into 1994. Egg-type chick hatch has been 5 percent above last year for the first 9 months of 1993, and increased hatch indicates that there will be sufficient replacement pullets available to maintain, or potentially increase the flock size even as slaughter increases.

Total egg production in 1994 is expected to be about 6 billion dozen, 1 percent higher than in 1993. Hatching egg production is projected to increase around 3 percent to 860 million dozen, while table egg production is likely to be 1 percent larger, at 5.2 billion dozen. A slowdown in production in the last half of the year is likely.

Net returns to egg producers have averaged 9 cents per dozen for the first 10 months of 1993, compared with a small loss in 1992. Returns for the year will be about 9 cents per dozen.

Wholesale New York egg prices will average 67-73 cents per dozen in 1994, compared to 72-73 cents in 1993. Positive net returns are expected for 1994, but they will be lower than in 1993, because of lower prices and higher feed costs. Retail egg prices will likely average in the high 80's, about a nickel below 1993.

Breaking of eggs, for use in various food products, continues to grow and will represent 25-26 percent of per capita egg consumption in 1994.

Higher Prices Discourage Egg Exports

Egg exports will fall slightly this year due to higher domestic prices. Through September, total egg exports were running just slightly below a year earlier. Exports of shell eggs, particularly table eggs, were up while exports of egg products fell due to a 70 percent decline in shipments to Japan. Egg production in Japan has been increasing since 1991 and domestic prices have declined, while the demand for egg products softened due to their recession.

In 1994, lower U.S. egg prices will help boost exports to Japan and Mexico, and remain about unchanged into Canada.

Outlook '93

For Release: Tuesday, December 1, 1993

EMERGING TRENDS IN THE RED MEAT AND POULTRY INDUSTRIES

Bruce Ginn
Chief Economist
Oscar Mayer Foods Corp.

Overview

As the meat industry progresses through the decade of the 1990's, one aspect remains a constant-----change. Over time these industries have always dealt with the dynamism driven by the economics and financial returns. Many of the aspects that actually have the greatest impact on the success of the participants in the meat industry are extraneous to the realm in which individual firms deal and therefore outside of their control. However, the extent of success or failure for individual firms as well as the respective meat sectors over time actually depends on how the respective entities deal with change. In fact, to stand still and do nothing may be a sure strategy for failure as the industries will change if in fact an individual firm does not. But, this is no different than challenges that these industries have faced over time.

Some of the issues are different. Issues such as environmental considerations, food safety, labeling, service, convenience, vertical integration, international trade, etc. are either new or at least have undertaken new dimensions. Again, this is not to say that these industries have not faced these issues in the past. But, change has dictated that these issues may take on a new dimension within the overall list of priorities than may have been the case in the past. And again, the success with which each individual entity deals with these challenges will be critical to industry growth over time.

Does this mean that some of the traditional concerns are of any lesser importance? Absolutely not. For many of the old adages still prevail. That is, understand the business, identify growth areas, control and reduce costs, look for opportunities, etc. In fact, these time-honored management concepts in fact have probably taken on renewed importance. In reality, the world has become more complex in that firms must continue to do what they have always accomplished in order to be successful, plus tackle new challenges. And frequently this must be done with a reduced staff. So in the traditional sense of the meat sector, focus must be directed to profitability in terms of cost, prices, etc. This will bear some relationship to the respective supplies available in the meat sectors and some assessment of consumer demand. But then strategic issues that will be important to the overall success and growth of a firm or an individual sector will include how these issues are addressed.

The Beef Sector

The cattle industry has liquidated inventories to the point that beef supplies have been balanced to demand such that prices sufficient for profitable returns have prevailed. However, the liquidation process was painful as inventories dropped from almost 116 million head in 1982 to 98 million head in 1989. Inventories at the outset of 1993 had escalated to almost 101 million head and the January, 1994, inventory is estimated near 102 million head. In the process, per capita beef supplies in terms of consumption dropped from about 78 pounds per capita to around 65 pounds. Over the same time period, cattle prices increased from about \$60/cwt. to \$77. A long term demand analysis uncovers significant downward shifts in demand from the mid-1970's through the 1980's. In the 1990's it appears that beef demand has stabilized. The inventory liquidation, supply reduction, and other adjustments led to stronger prices which in total have represented profitable opportunities for the production segment of the industry. It is the profitability, particularly in the cow/calf operations, that have halted liquidation and set the stage for expansion. In essence, the precarious beef cycle should be poised for an expansion mode into the late 1990's.

Inventory expansion normally leads to larger beef supplies, but significant questions exist as to whether supplies will in fact expand in 1994. Beef production expanded in both 1991 and 1992, albeit the year to year percentage increases were minimal. For 1993, indications are that production will actually be about the same as in 1992. And prospects for 1994 actually point to about the same supply as in 1993.

It is important to realize that about three-fourths of domestic cattle slaughter consists of cattle that pass through feedlots. The remaining portion of slaughter consists of cows and other livestock that are not fed concentrated grain rations. In 1992, the non-fed sector was actually responsible for much of the supply increase. In 1993, non-fed kill also made up a significant portion of the increase, albeit fed cattle supplies did exceed year earlier levels after the disastrous winter quarter. And for 1994, the industry will begin the year with a significantly larger number of cattle on feed, which more or less indicates an increase in fed cattle supplies in the winter quarter. Of course this is compared to the anemic year ago level when extremely harsh winter weather limited not only numbers of fed cattle that were marketed, but also weights.

For the remainder of 1994, it is unlikely that marketings of fed cattle will increase on a year to year basis. The primary reasons are twofold. Firstly, cost of gain will almost assuredly be significantly higher than the relatively low levels of 1993. The short feed grain and soybean crops assure this scenario. Higher costs of gain usually limit demand for feeder cattle as feedlot replacements. Secondly, the supply of feeder cattle has been restricted. Many of these feeder cattle were placed on feed, thus limiting the number of yearling cattle and calves outside feed lots. Also, there is question concerning the extent of the increase in the 1993 calf crop, a situation that could exacerbate the already tight situation of feeder cattle. For these reasons, the availability of fed cattle, particularly in the last half of 1994, will be limited.

In addition, the cyclical expansion under way in the cattle industry will limit non-fed slaughter. After all, the presently rising feed costs are quite unique from a historical perspective in that the tight grain supplies did not result from drought; for once, rain didn't make grain! As such, the supply of roughage should be extremely plentiful and together with relatively strong cattle prices, will continue to provide impetus for expansion. While placements of cattle on feed may be limited, incentives for most cattlemen to continue to retain cows and heifers still exists. The beef supply in 1994 is expected to be basically unchanged from the relatively low and tight level of 1993.

Since production for 1994 is expected to be about the same as in 1993, it generally follows that prices probably won't be much different either. However, the price pattern may be significantly different. In 1993, unexpected harsh winter weather, a substantial contrast to the relatively open winters of past years, led to record high cattle prices. Under more normal weather conditions and with an assumed level of production, cattle prices, although averaging about the same in 1994 as in 1993, will likely peak in spring and decline into the fall. This is not at all an unusual seasonal pattern.

BEEF

Beef Production				Prices	
	1993	1994	%	1993	1994
1	5358	5450	2	81	77
2	6000	5700	0	80	80
3	6075	6000	-1	74	76
4	5800	5700	-2	74	75
Year	22923	22850	0	77	77

Supplies of ground and processed beef, which make up a little less than half of total beef supplies, will be slightly more plentiful as contrasted to supplies of fed beef. Cow slaughter probably will not significantly increase from the relatively plentiful level of 1993. Imported beef, a significant source of grinding beef, will continue to be restricted by the meat import law, thus supporting prices of lean grinding beef.

Issues for the Beef Industry

One of the basic tenets of a sound marketing program is knowledge of customer requirements. To a great extent, the meat industry in general and the beef industry in particular has not been especially cognitive of what the consumer actually desires in terms of product form, quality, price, etc. Now this is no wonder, since consumers in the population centers are significantly divorced in terms of the marketing chain

from ranchers, cattle feeders, packers, etc. in the Midwest. But more vertical coordination in all of the meat sectors has been occurring through various mechanisms. The beef industry is in the process of realizing that a marketing program can pay significant dividends for the industry.

One of the big problems for an industry that is not vertically integrated lies in limited brand identity. Innovation and capital investment, particularly in marketing programs, may be impeded. But some of the lessons of the more vertically integrated industries certainly portray a testament to the fact that such structure facilitates the development of products that are more attuned to consumer demand. One of the biggest challenges facing the beef industry in upcoming years will be to develop mechanisms that accurately transmit the fuzzy signals from the consumer to the producer in terms of the appropriate product attributes.

Not totally divorced from the notion of vertical coordination is the issue of total system cost. Other industries that are either vertically integrated or vertically coordinated have been relatively more successful than the beef industry in reducing system cost. Marketing research indicates that consumers place a significant value on taste, convenience, dietary considerations, etc. Although price may not be the number one consideration, it is always high on the list. And relative prices among various meats as well as foodstuffs will undoubtedly influence consumer demand. It becomes very difficult to reduce prices to the consumer if an industry cannot reduce cost. Generally speaking, the more profit centers that exist from the producer to the consumer, the more difficult it may be to reduce system cost. Contrasting the marketing chain of beef to that of pork or poultry will underscore some of the problems in the relative reduction of cost and the inherent problems for the respective sector. So cost reduction on both an absolute and relative basis will continue to plague the beef industry into the late 1990's.

Environmental issues will have a unique impact on the beef industry. Consider very simply that the beef industry is much more dependent than the other meat sectors on public lands policy. A significant and substantial portion of beef cows reside on public lands. In the past, these lands had little alternative use in that ruminants (cattle and sheep) represented the primary utilization of those lands in terms of the conversion of forage to products deemed valuable by society. More recently, however, it is becoming clear that those livestock operations do have a significant competitor - humans. And other demands placed upon those lands than the traditional ranching operations will likely result in higher costs associated with cattle raised on such lands. As such, it becomes exceedingly difficult to reduce costs in such an environment.

Food safety obviously has significant implications for the beef industry as well as other meat sectors. Unfortunately, the beef industry has been the target of much adversity concerning safety. Although the jury is still out, it is amazing that beef demand did not appear to suffer significantly during the E-coli problems that arose earlier this year. It is abundantly clear that substantial resources will be devoted to inspection, labeling, information regarding food preparation, etc. There are a number

of issues that the industry must face, including dissemination of good, solid, scientific data concerning safety. Such resources will command a cost, thus making it difficult once again for the industry to reduce costs at the same time that resources are being added to the process.

The Pork Sector

The pork industry will begin 1994 with a reduced number of market hogs available from a year ago. Now this will almost assure that production in early 1994 will be limited. At the same time, past USDA reports have suggested that the industry is on the verge of expansion as the number of sows farrowing in the December-February time period has been indicated to rise 2% on a year to year basis. The problem is that this information was reported this past September and since that time, feed costs have risen substantially while hog prices declined. The feed situation is reminiscent of the fact that these industries do not operate in a vacuum; they are subject to extraneous forces over which individual producers usually have little or no control. And a substantial increase in feed costs will significantly influence pork supplies. That is, eventually.

In the short term, it is extremely doubtful that the early 1994 pork supply will reflect the 8% reduction reported for the corresponding June-August pig crop. In fact, rising feed costs and reduced profitability could actually lead to some degree of liquidation, thus helping to limit the extent of the decrease in early 1994 pork supplies. But by the same token, it is unlikely that producers will follow through with expansion plans as expressed in past reports. If so, pork production for 1994 will likely decline once again on a year to year basis. This follows a preliminary drop estimated to be 1% in the 1993 production report.

Like beef, pork demand over time has been declining. Demand for pork, stable in the 1960's and early 1970's, declined precipitously throughout the 1980's. However, more recent analysis suggests that demand for pork has stabilized in recent years. And there are probably some relatively sound reasons for the stability/firmness in pork demand, especially in contrast to beef.

Assuming pork demand is at least stable, lower production of pork in 1994 will lead to higher prices. Since hog prices are normally at a seasonal peak in the summer months, it appears reasonable that hog prices will average \$50 or above during that period of time. For 1994, prices will likely increase about \$2 from 1993 levels, based upon a 2% reduction assumed for the pork supply. Ironically, the projected price increase for 1994 is probably similar to the increased cost resulting from corn and protein. In total, profitability for the producer probably won't change much. And since production will be basically profitable, larger supplies will eventually result.

PORK

Pork Production				Prices	
	1993	1994	%	1993	1994
1	4207	4150	-3	45	47
2	4151	4025	-3	48	50
3	4140	4150	0	48	50
4	4475	4400	-2	45	48
Year	16973	16675	-2	46.50	48.75

But, unlike the beef sector, pork consumption over time has not only been relatively stable, but actually has been increasing. Now the upward trend in consumption may be disrupted in 1994 and 1995 by significantly higher feed costs, the overall trend of consumption is expected to remain upward. Again, this is entirely consistent with the demand situation portrayed by pork and again contrasts significantly with the deep liquidation that has occurred in the beef industry, as illustrated by record low beef consumption.

Issues for the Pork Business

It is probably not coincidental that pork demand has stabilized, as several things have developed in the pork industry from a marketing perspective. The industry-funded promotional campaign appears to have been successful. Pork product has undoubtedly improved over time as referenced by higher yielding, leaner, closely trimmed items. But one significant difference between the pork and beef industry lies in the fact that a substantial amount of pork is cured and processed. Although this adds cost, it also adds value in terms of taste, convenience, packaging, etc. And a vast majority of pork is marketed by branded identity.

A perpetual debate continues concerning the merits of branded consumer products versus private label. But, one thing certain is that it is extremely difficult to get a message to the consumer in the absence of brand identification. For one of the primary reasons for the existence of a brand lies in a vehicle from which to portray a message of product differentiation.

Vertical integration in all of the meat sectors is an issue, but is especially of primary interest in the pork business. The contrast in industry structure of the vertically integrated operations in the Southeast as compared with the traditional farmer-feeders in the Midwest raises many questions and issues. There is little doubt that larger, vertically integrated operations have generally been successful in increasing productivity, and lowering costs.

The Broiler Sector

Profitability in the broiler industry has been strong in spite of larger supplies. Although production of broilers in 1993 was up 5%, prices also increased. With costs down due to lower feed costs, profitability was quite significant. In essence, this environment will promote supply increases well into 1994. The flock will easily accommodate increases of 4-5% and perhaps possibilities of 5-7%.

However, increased feed prices, together with considerations of hatchability, weights, etc., may limit production increases in 1994 to around 4%. But demand will be sufficiently firm to support prices near 1993 levels.

BROILERS

Broiler Production				Prices (12 City)	
	1993	1994	%	1993	1994
1	5359	5600	4	53.1	52.0
2	5628	5825	4	56.9	55.0
3	5650	5600	4	56.9	52.0
4	5550	5750	5	54.0	53.0
Year	22187	23075	4	55.0	54.3

On the demand front, chickens have continued to display a significant resilience in terms of demand, a situation that has prevailed through most of the recent years. The industry continues to move larger quantities at the same or higher prices, a true testament to strong demand. Some of the key underlying reasons for the demand scenario in the broiler business reflect issues of the entire meat industry.

The broiler industry has capitalized on emerging demand in the food service sector, realizing a growth opportunity some years ago. Synergies in product development and packaging led to many new products at retail. The industry recognized what the customer demanded and developed avenues to address those demands. The point is that the industry has been responsive to the customer.

Growth in terms of consumption has been upward and persistent, not only as the industry has improved demand, but also costs have been reduced. Undoubtedly, the vertically integrated structure of the industry has played a significant role in terms of the ability to achieve cost reduction programs, product development, marketing, etc. Long term growth reflects annual per capita increases in consumption of 2-3% and very likely the industry will be able to perform conservatively at that level into the

1990's. Of course, expected profitability is one of the big drivers of this scenario.

International trade represents a significant opportunity for the meat industry, and poultry in particular. In the broiler business, exports are expected to increase 10-20% in the upcoming year. But the experience of recent history suggests that other countries will also increase production in upcoming years. Poultry production in some of the major producing countries has expanded in recent years, a situation that parallels that of the United States. In the E.C., which has experienced the slowest expansion of the major producers, various economic reforms that reduce feed costs could provide impetus to expand output into the late 1990's. Undoubtedly, Asia will continue to rapidly increase poultry production. As such, the U.S. will face competition in meeting world demand, and consequently, domestic as well as international customers will be of utmost importance.

Issues in the Broiler Industry

As an innovator in terms of cost reduction, marketing, packaging, strategic alliances, vertical integration, etc., probably the biggest challenge facing the broiler industry in upcoming years will be maintaining momentum and a competitive advantage not only to other firms but also to other meat and food sectors. All too familiar is the relationship described by the experience curve, production function, and so on, where the innovator is the recipient of significant advantages at the earliest stages of the process. As time passes, adoption of methods and other things tend to diminish those advantages. In many instances, the broiler industry is held in such high regard that other sectors study the methodology and decide whether and how to emulate the success of the chicken industry.

The broiler industry will also face several issues that may be relatively more intense than in other meat sectors. For example, animal welfare is an issue for the meat industry in general, but poultry production rightly or wrongly will represent a source of concern. And the industry will need to address these concerns, at the very least from a vantage of appropriate public relations. Regardless of outcome, cost will need to be expended.

The broiler industry has capitalized on the availability of labor in the southeastern United States. The labor advantage may be somewhat diminished as time passes. In addition, worker safety and health issues, including ergonomics, is a high priority for the meat industry including the broiler business. Such programs have been gaining momentum over time. These programs have a cost, which hopefully over time will be outweighed by the benefits accruing from them.

Eventually, the identity among various types of meat will become even more clouded than at present. Already, blends in meat formulation have obscured the lines between red and white meat. A closely related issue is food labeling, where ingredient statements are of paramount importance. Some would suggest that poultry has been the beneficiary of the past labeling regulations which have come under closer scrutiny.

As these issues are addressed, poultry may experience diminished advantages in these areas.

The Turkey Sector

Returns in the turkey industry have been very lackluster since 1986. This led to significant changes in the industry in terms of the participants, marketing, production, etc. And with no significant changes in returns relative to past years, additional changes will probably take place.

One of the significant problems lies in demand, or perhaps the lack of growth in demand. Realizing that consumption is an end result of changes in supply/demand, the growth in turkey consumption in the mid-1980's did reflect a significant increase in further processed demand. Traditionally a whole bird business, the industry grew significantly in the 1980's such that whole birds represents no more than about one-third of the business in terms of tonnage. Nearly all of the increases in consumption in the late 1980's accrued to the further processed sector, which reflected new product development, marketing, as well as production, etc. As boning margins improved substantially, the industry added substantial capacity to accommodate what was viewed at that time as permanently expanded demand. Reality of the past few years suggests that the demand of the late 80's did not follow through into the 1990's, a situation of over-capacity developed, and the industry has responded.

For 1994, the marginally profitable situation of 1993 will lead to a modest increase in production. Basically, some of the reductions of 1993 (i.e., west coast) are now past, and slight increases in poult placements in other regions will lead to a rise in production. However, abrupt changes in production are not expected and the usual seasonal pattern should prevail.

TURKEY

Turkey				Production		Prices (16-20 Toms)	
	1993	1994	%			1993	1994
1	1060	1075	1			58	58
2	1216	1225	1			58	68
3	1270	1300	2			69	68
4	1285	1300	1			69	70
Year	4831	4900	1			64.8	65.3

Turkey prices for 1994 should be slightly higher than 1993. Large stocks levels are not expected to be a problem. And reduced production of red meats later in the year should be supportive to the whole bird sector.

Issues for the Turkey Industry

One of the paramount issues facing the turkey industry lies in the further processed sector. Can the industry develop new products and market and promote them to expand demand? While this was primarily responsible in the 1980's for increasing turkey consumption from 12 to 18 pounds per capita, growth in the further processed sector has been greatly diminished more recently.

While the food service sector represents a potential significant opportunity for further processed turkey, realizing that potential has been difficult at best. Traditionally, food service procurement is significantly concerned about the capacity of their suppliers, and a relatively small industry such as the turkey business was cause for concern. However, the industry has now demonstrated the potential to supply large quantities that can be demanded by the food service industry. Product development will continue to be a key.

Marketing approaches in the retail also pose a substantial issue for the industry. With the ongoing debate concerning premium consumer branded items versus private label, perhaps the turkey industry epitomizes the results of these issues most vividly. Large volume, low cost suppliers are able to provide commodity, private label products at attractive price levels to consumers. The industry has had a difficult time differentiating branded products in the turkey industry, and this has limited profitability, and growth. The jury is still out on the ability of the industry to develop and market products that will command prices to the consumer that will afford sufficient profitability to promote and sustain growth.

Summary of Emerging Issues

Various issues have been discussed in conjunction with the respective industries. Again, it is important to realize that a comprehensive list of issues would impact virtually every sector of the meat business, albeit the impact will be more pervasive on some sectors rather than others. As such, a list of many of the pertinent issues would be as follows:

- 1) Industry structure, including organizational characteristics of size, type, location, etc. for each step of the production and marketing process.
- 2) Consumer demand, including the derived demand at various levels of the marketing chain.
- 3) Safety, including not only product safety, but also worker safety.

- 4) Product labeling, including all the issues associated with NLEA.
- 5) Service levels which address how the industry serves the respective customers, including, but not limited to the convenience that is built into product demand.
- 6) Feed cost and the minimization of these costs, including freight, formulation, milling, etc.
- 7) Vertical integration and the related issues, such as vertical coordination, strategic alliances, etc.
- 8) Technology, which includes the adoption of practices that reduce costs, improve demand, enhance efficiency, etc.
- 9) Foreign trade, which addresses both imports and exports, realizing that the lowest cost producers will possess inherent advantages providing they have the right product, service levels, costs, etc. and can ship product unimpeded.
- 10) Product quality, where a given quality level is associated with respective value, etc.
- 11) The price system, including price discovery, price determination, operational efficiency of the pricing system, with specific emphasis upon the accuracy and timeliness within which appropriate signals are transmitted from one level of the marketing chain to others.
- 12) Labor issues, which include but are not limited to wage rates, productivity, ergonomics, the labor pool, skills, etc.
- 13) Animal rights and welfare, beginning with production agriculture, but also including the way livestock and poultry are handled in the manufacturing processes.
- 14) Brand identification and strength, including product differentiation, marketing and promotional programs, the success of advertising, etc.
- 15) Marketing channels and distribution, which in essence, relate to the most cost-effective methods of getting raw material from the production point to the consumer in a time, form, and place that represent maximum utility at the lowest cost possible.

No doubt there are other emerging issues that will impact the agricultural and meat business. However, it is imperative that the successful firms of the future deal with the most important of these considerations, which will represent the strategic avenue to success.

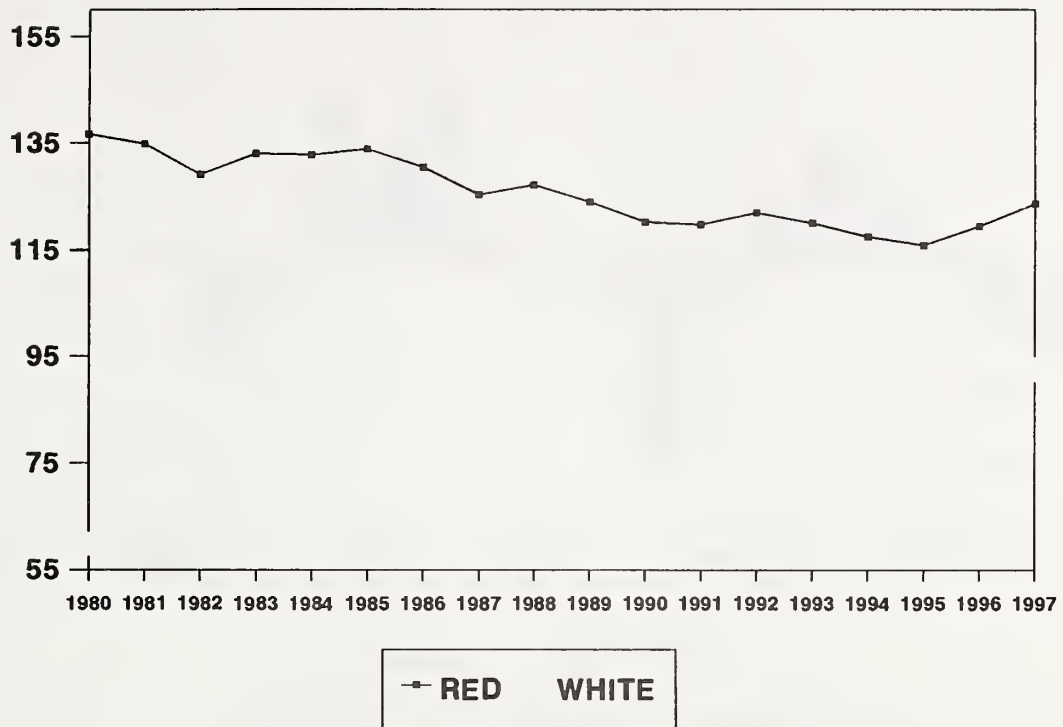
REFERENCES

Purcell, Wayne, Industry Outlook Oct., 1993, and other selected materials.

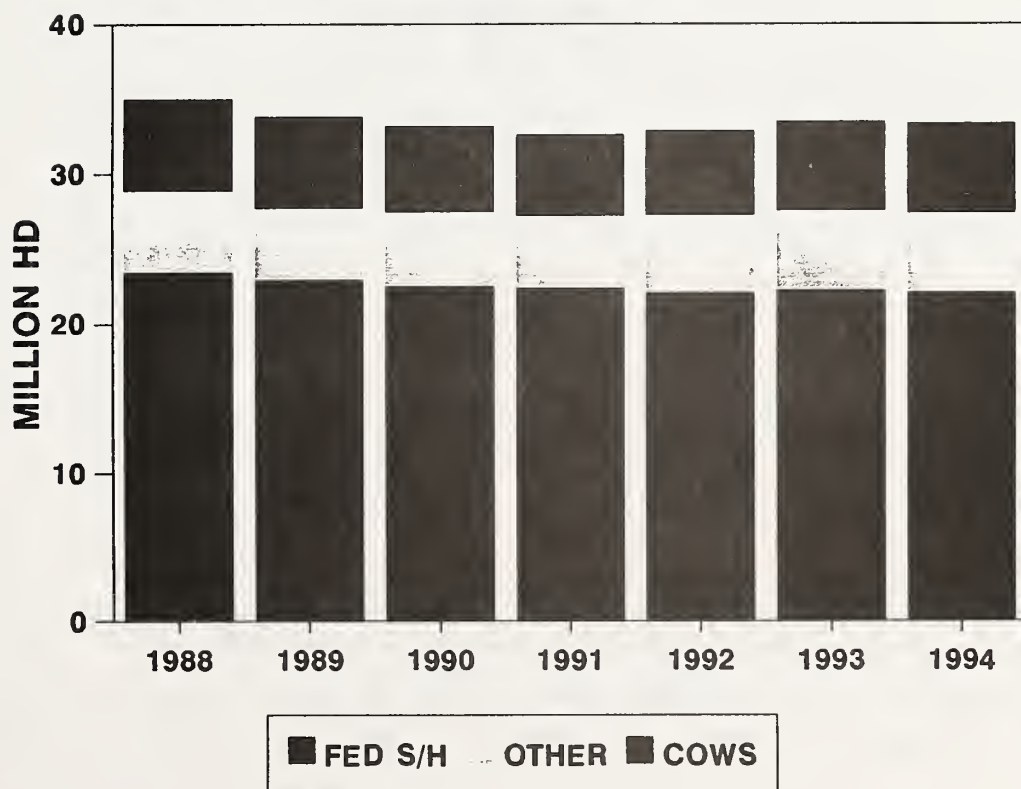
_____, Sparks Companies, Inc., selected materials

MEAT CONSUMPTION

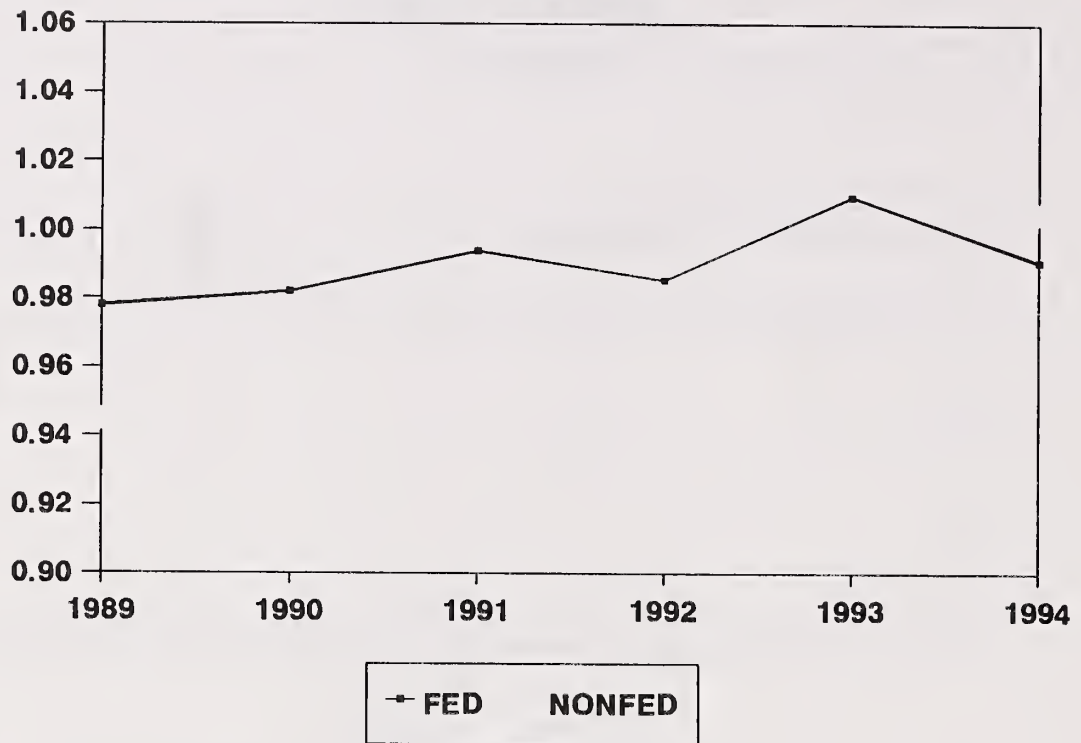
RED & WHITE



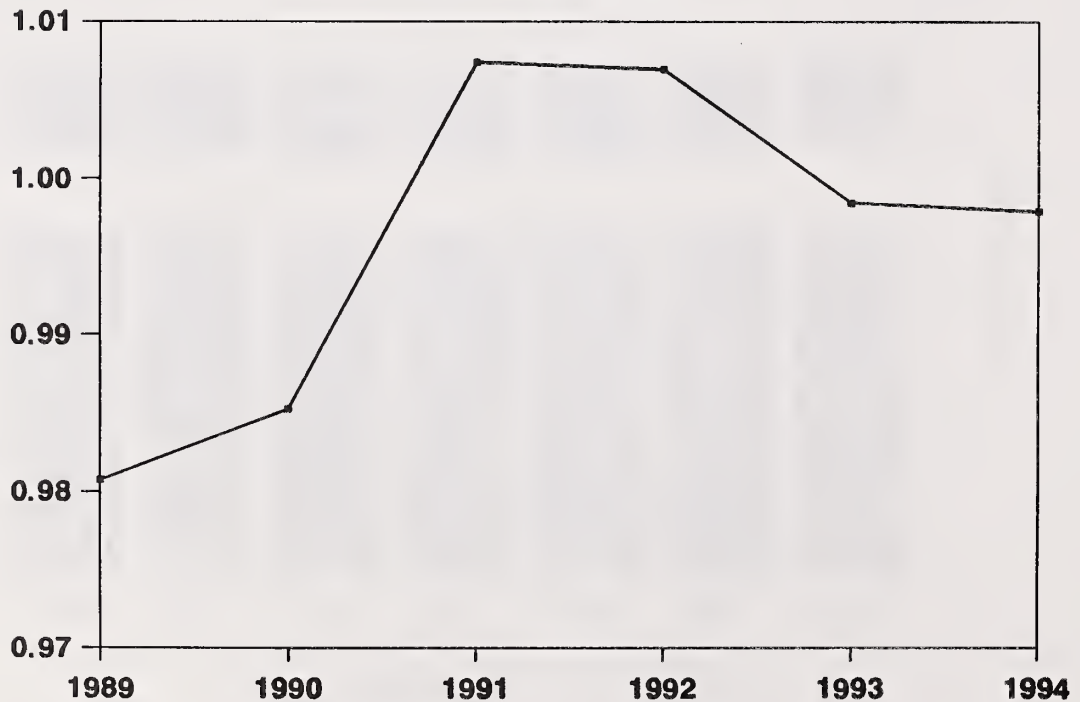
CATTLE SLAUGHTER



CATTLE SLAUGHTER PCT OF Y.A.

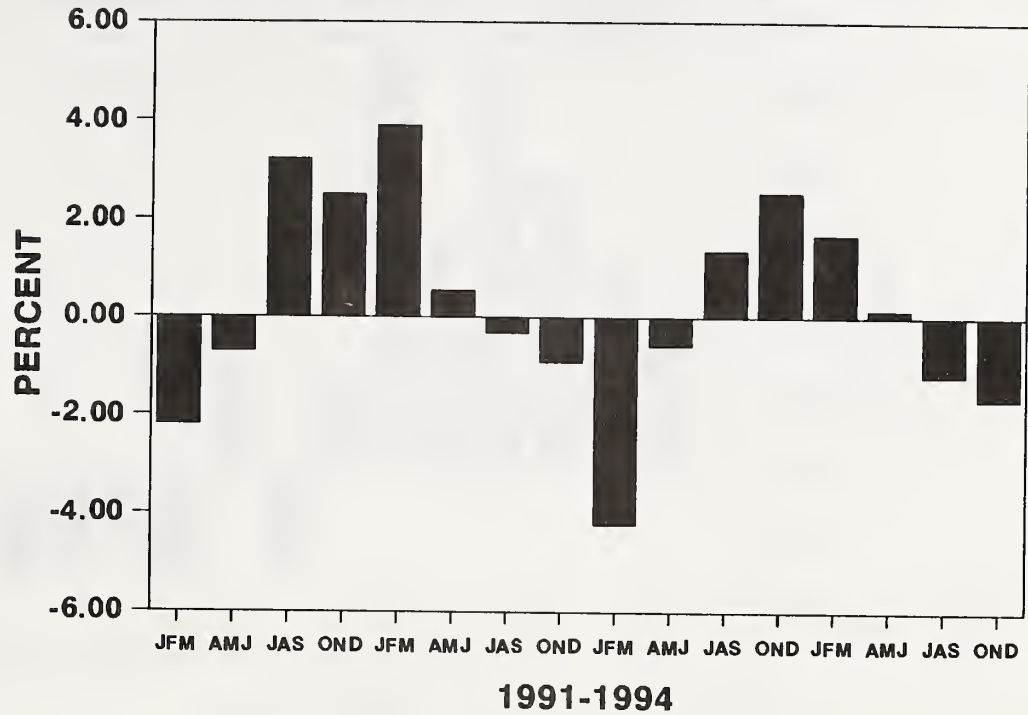


BEEF PRODUCTION PCT OF Y.A.

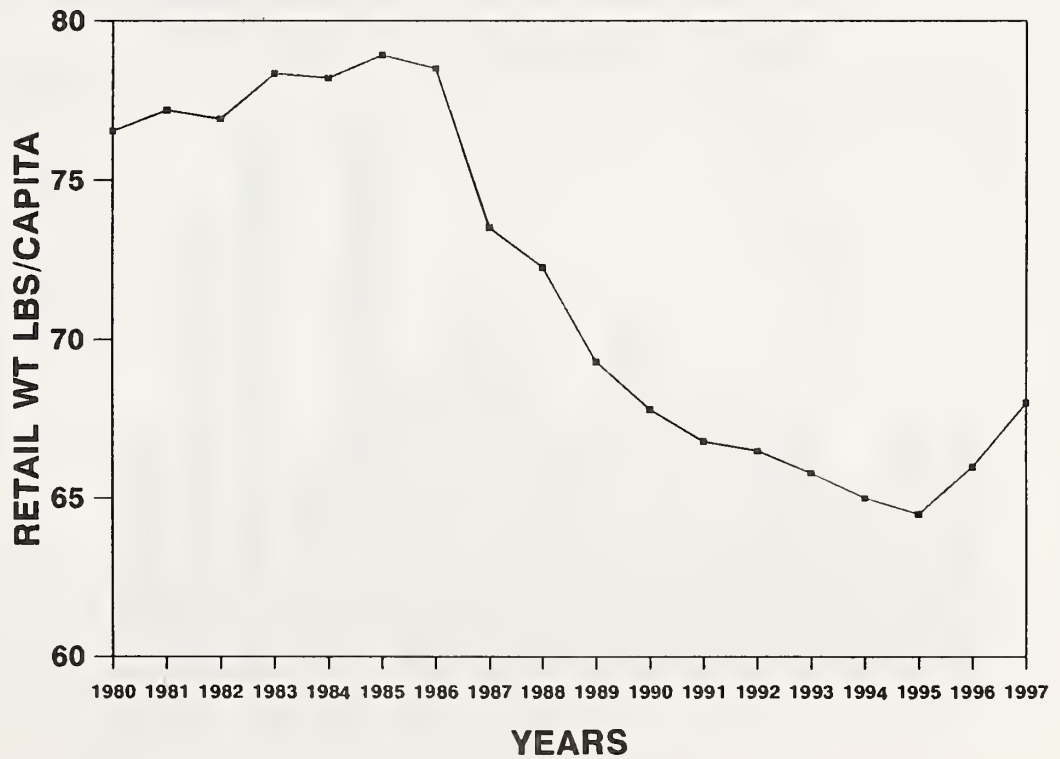


BEEF PRODUCTION

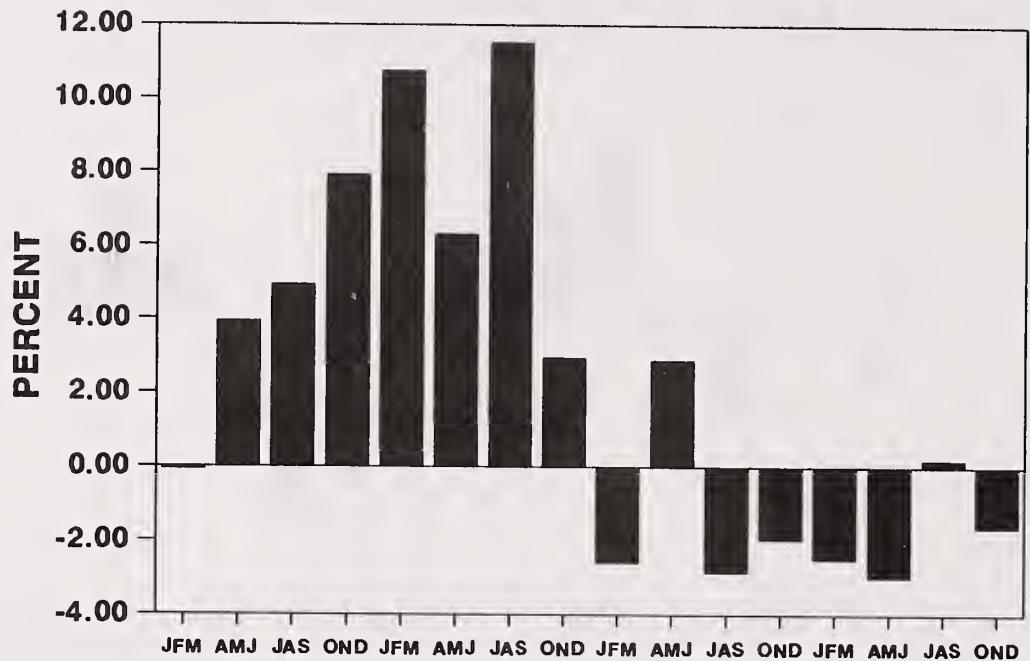
PERCENT PREVIOUS YEAR



BEEF CONSUMPTION

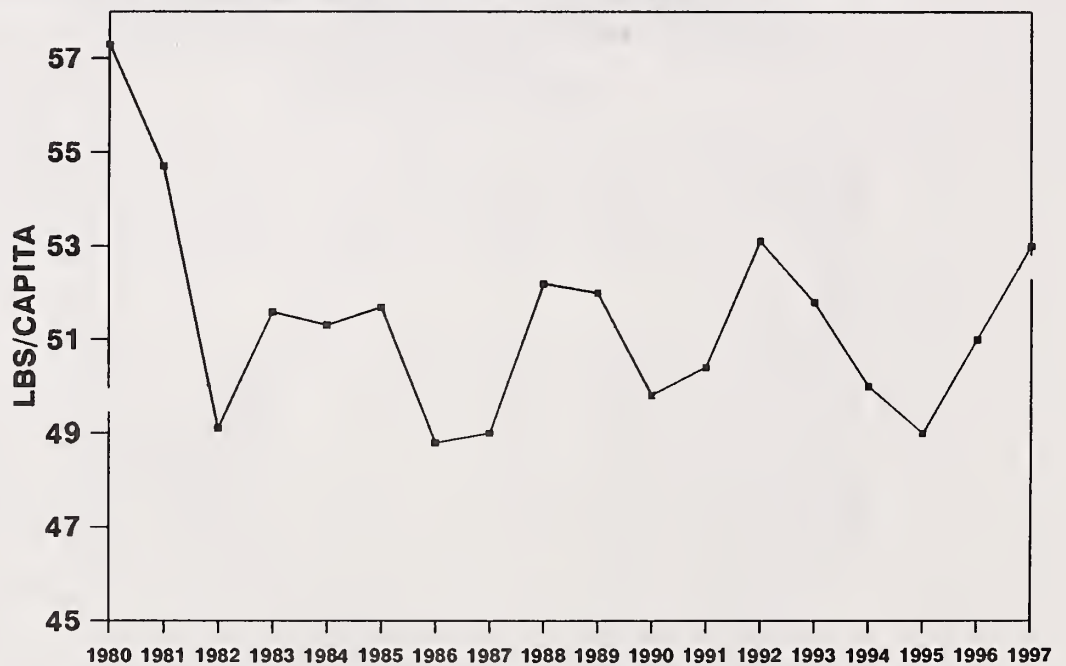


TOTAL PORK PRODUCTION PERCENT PREVIOUS YEAR



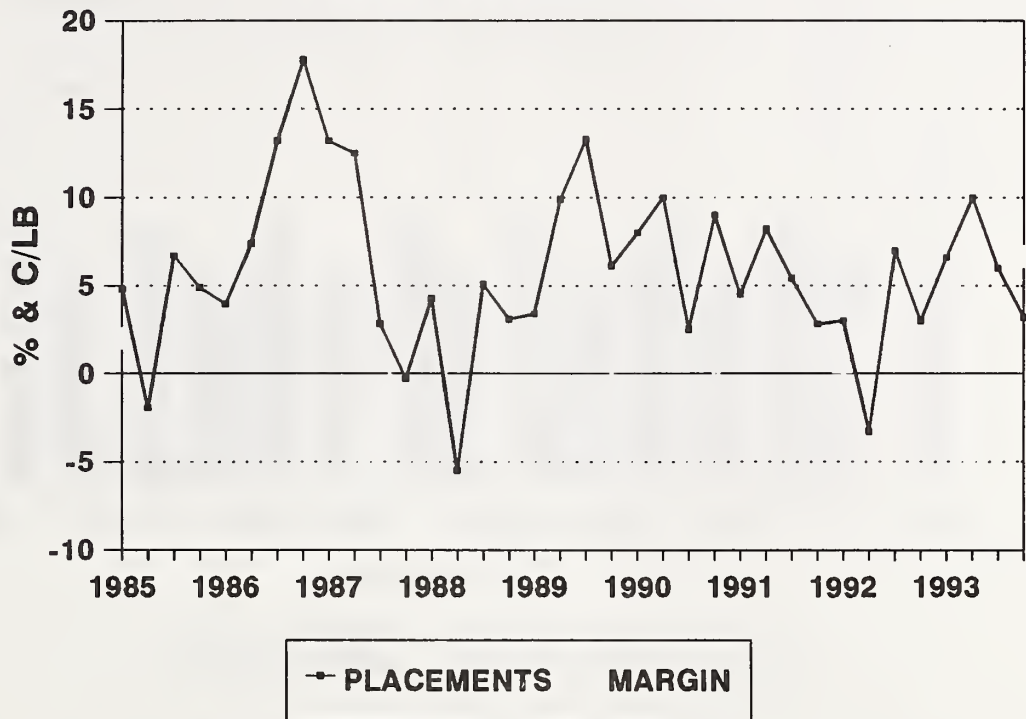
1991-1994

PORK CONSUMPTION

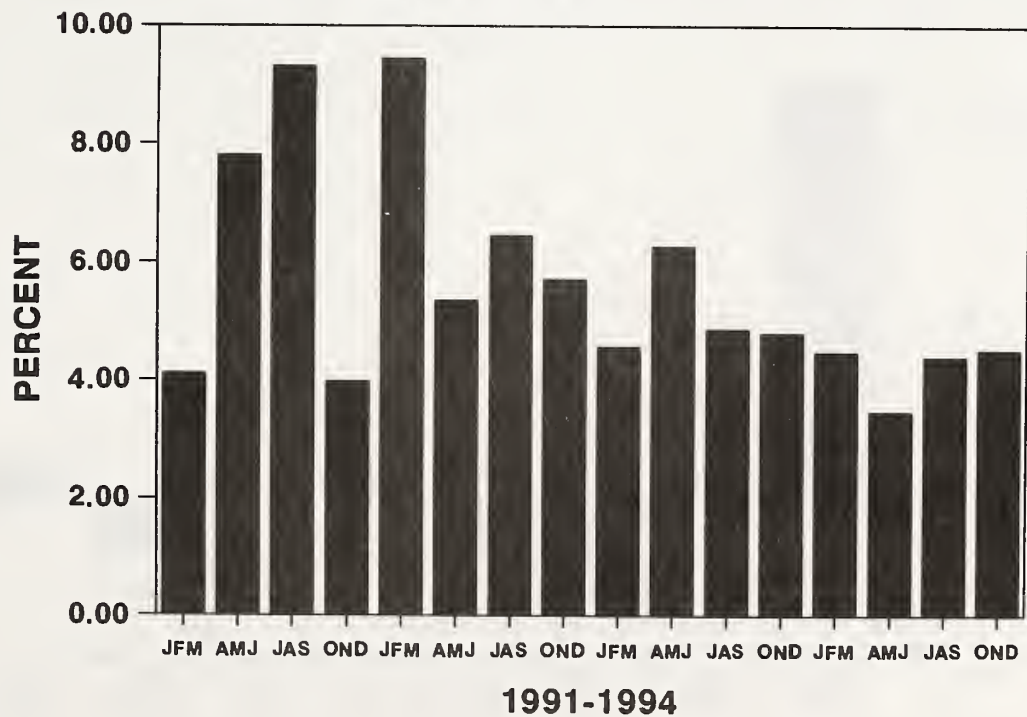


—•— ACTUAL/ESTIMATED TREND

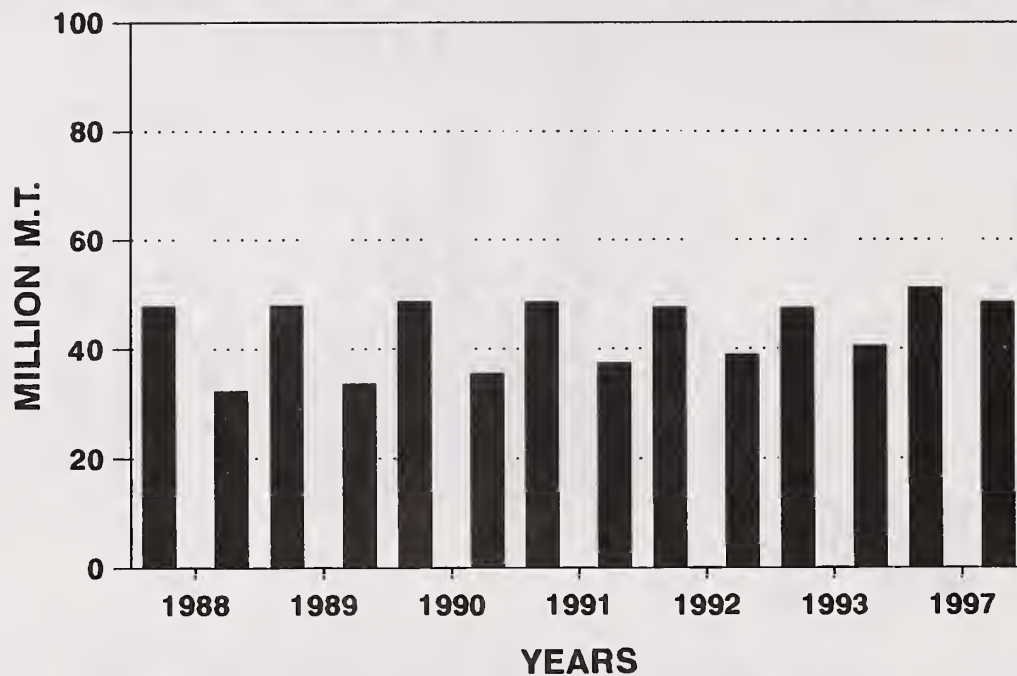
BROILER PULLET PLACEMENTS AND MARGIN



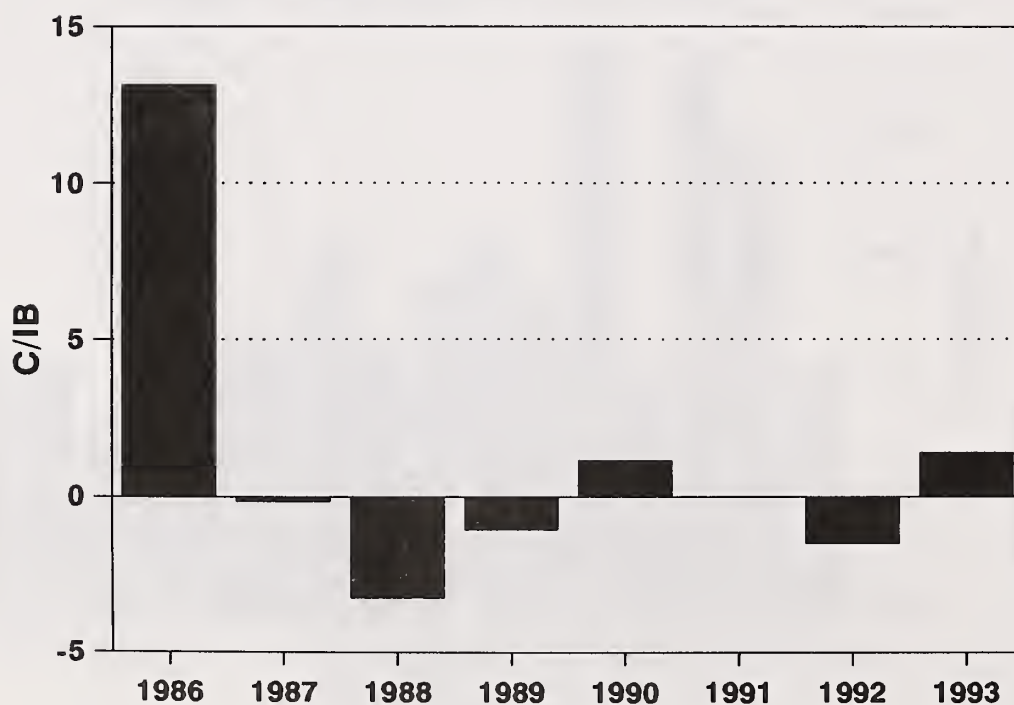
BROILER PRODUCTION PERCENT PREVIOUS YEAR



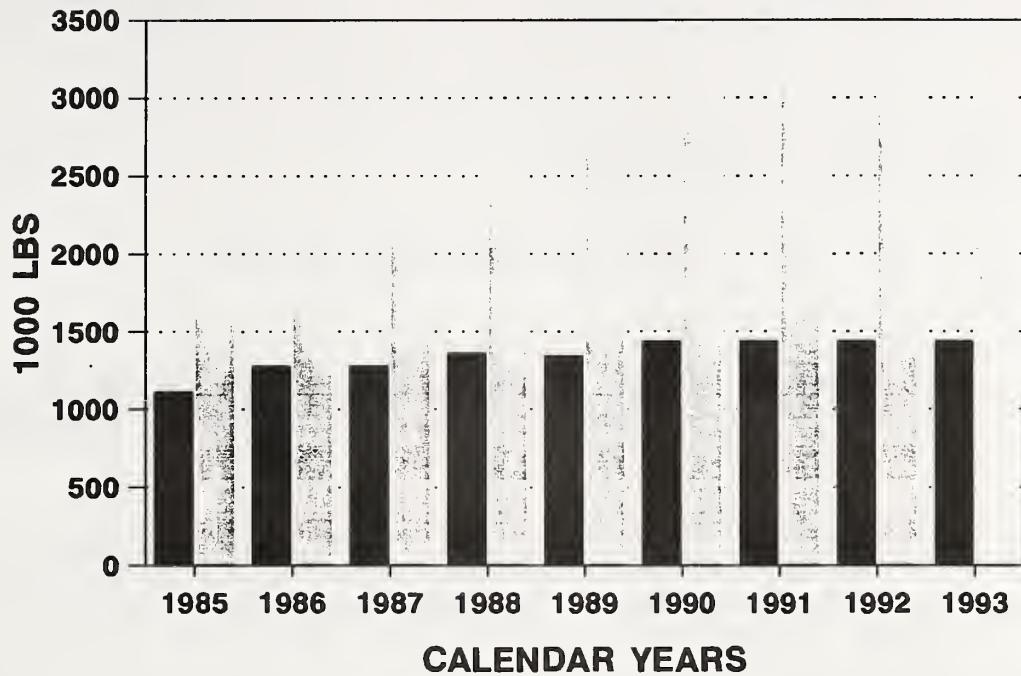
WORLD MEAT PRODUCTION



TURKEY RETURNS ANNUAL AVERAGES

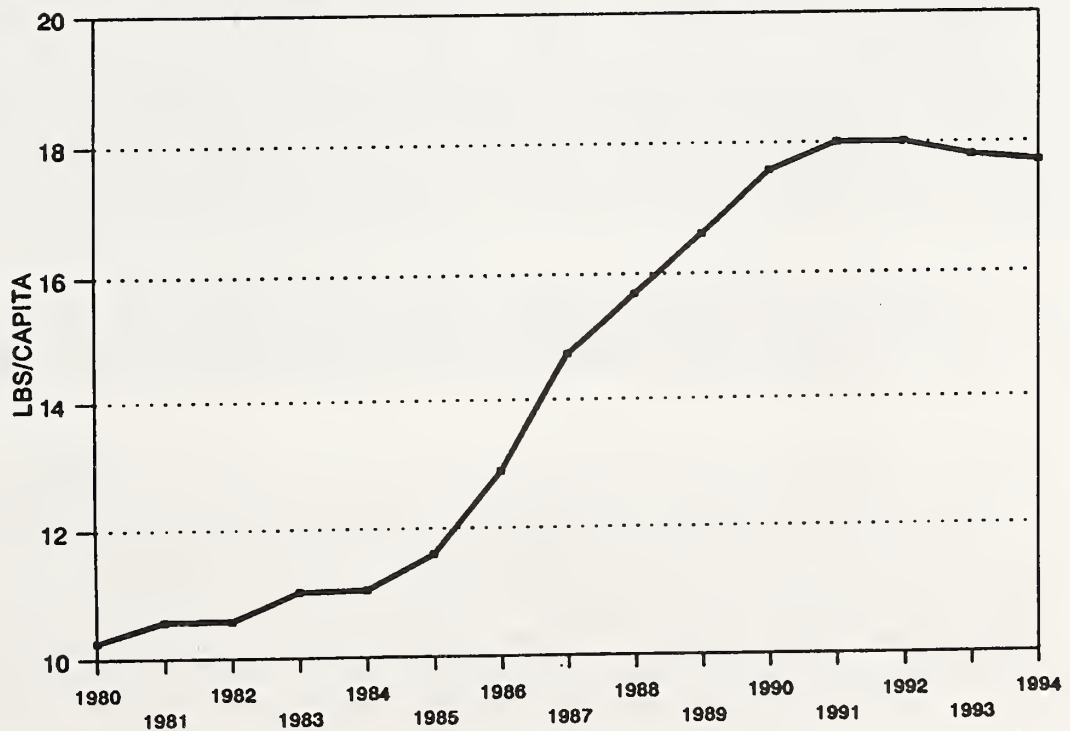


TURKEY PRODUCTION

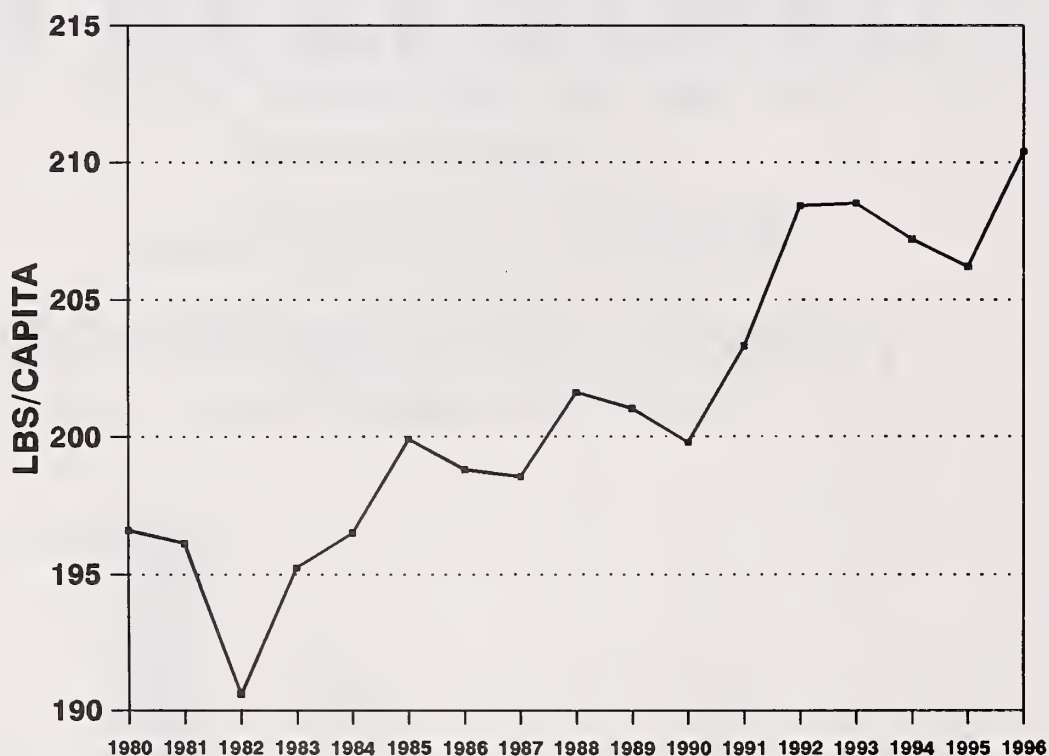


■ WHOLE BIRD ■ FURTHER PROCESSED

TURKEY CONSUMPTION



TOTAL MEAT CONSUMPTION



Outlook '94, Session 20

For Release: Wednesday, December 1, 1993

OUTLOOK FOR U.S. AQUACULTURE

David J. Harvey
Agricultural Economist
Economic Research Service
U.S. Department of Agriculture

Where will U.S. aquaculture be headed in the near future? The rapid pace of technological change injects too many unknowns to make good long-term forecasts, so this outlook is limited to the short-term.

- o In the next several years the commercial availability of major fresh water fish such as striped bass, walleye, and yellow perch and shellfish species will have shifted almost entirely to aquaculture production.
- o With relatively large amounts of suitable land and water supplies, plus a large domestic market, the United States will likely remain a major supplier of cold and temperate fresh water species.
- o Development of new production technologies will be augmented by a growing body of knowledge in the areas of reproduction, growout strategies, disease prevention, and nutrition.
- o The United States' position as a major grains producer, a major component in aquacultural feeds, will be a stimulus to aquaculture research.
- o Over time, gains in aquaculture production efficiency will lower real production costs. Declining real production costs have already been a large factor in the growth of today's major aquaculture industries.

The future for marine aquaculture in the United States is less certain. The most serious problem is that most marine aquaculture is done in shallow coastal waters, the waters most affected by industrial and residential pollution and development. Because the ocean has traditionally been viewed as a common property resource there are also conflicts with other commercial and recreational users which may slow or prevent the development of marine aquaculture. However, the growing pressure on many marine stocks will continue to lead to research efforts into the practicality of their aquacultural production.

Future growth for U.S. marine aquaculture may come from expanding its role as a supplier of scientific expertise, advanced production systems, or specially bred or genetically improved juveniles for physical growout elsewhere. This role might be especially viable for warm water species that would be impractical to farm domestically.

Declining Consumption

Contrary to the impression you might have gotten from seafood or aquaculture trade publications, per capita seafood consumption in the United States is not rising, but rather it has been declining. While per capita consumption has fallen in the last several years, total consumption has been relatively steady as per capita declines have largely been offset by increases in population. For aquaculture, growing sales have been achieved mostly by capturing a larger percentage of the basically flat total domestic seafood consumption. This implies that aquaculture products have been able to displace wild-catch seafood products, but their growing sales have not had much of an impact on livestock and poultry consumption. Over the last several years, beef consumption has declined, pork consumption has been steady, and poultry consumption has risen steadily.

The primary reason that seafood consumption has declined over the last several years is its higher prices relative to beef, pork, and poultry. However, there are a number of secondary factors such as advertising impact,

product familiarity, safety concerns, and eating patterns. For the most part, on a pound for pound basis seafood products are generally more expensive than beef, pork, or poultry products. A prime example of these price differences is that major grocery chains in the Washington area can retail broilers for under 70 cents a pound. This is less than the current farm level price for catfish. It will take a great deal of work developing new production and processing techniques before the aquaculture industry can compete on a direct price basis with the poultry industry.

While relative price differences have probably had the largest impact on seafood consumption, advertising has also had an effect. The beef and pork industries both have aggressive generic advertising programs to promote consumption. The poultry industry does not have a generic advertising campaign, but it has plenty of brand name advertising. Also, the size differences between the aquaculture industry and the livestock and poultry industries mean that the advertising budget for aquaculture products is only a fraction of those for the other industries.

While much of the U.S. population lives within relatively close proximity to the ocean, most consumers are much less familiar with how to prepare the wider variety of seafood products than they are with beef, pork, or poultry. This tends to hold down purchases for home consumption.

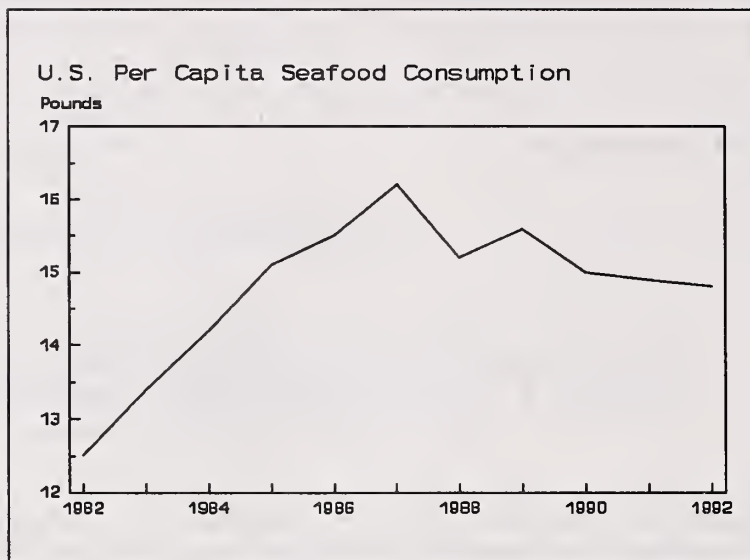
The growth of fast food outlets has also helped beef and poultry consumption. With only a few exceptions, seafood products are not the primary items on fast food menus. A larger percentage of seafood consumption takes place in higher-priced restaurants, where people are more likely to try unfamiliar species. Meals at these types of restaurants are viewed as more of a luxury item, so their growth over the last several years has been much slower.

Aquaculture's Future Impact

Due to the price differences between seafood and beef, pork, and poultry products most of the growth in aquaculture will continue to come at the expense of wild-caught seafood. If there is the same type of growth in aquaculture production over the next seven years (1994 to 2000) as there has been in the last seven years, then by the end of the 20th century aquaculture could be supplying upwards of 25 percent of all the seafood consumed in the United States.

Farm-raised salmon and shrimp already account for up to 25 percent of worldwide production of those species. In 1992, U.S. farm-raised salmon imports were estimated at 71 million pounds, accounting for at least 60 percent of all salmon imports and around 16 percent of total domestic use. The estimated 390 million pounds and \$1.3 billion of farm-raised shrimp that were imported in 1992 represented over 60 percent of all shrimp imports and 40 percent of domestic consumption. For these two species, U.S. farm-raised production adds only a small percentage to total consumption.

In addition to salmon and shrimp, basically 100 percent of the catfish, trout, and hybrid striped bass consumed domestically are farm-raised here in the United States. Aquaculture also accounts for approximately half of all the crawfish produced. Tilapia, which is rapidly growing in popularity, is chiefly a farm-raised product. In addition, a good percentage of the major mollusk species, such as oysters, clams, and mussels are also farm-raised. Over the next seven years a number of species including, turbot, sea bass, sea bream, and red drum



could be added to the list of species where aquaculture producers are major suppliers.

In the long-term, aquaculture will likely become a major supplier of seafood products in the mid-to-higher priced end of the market. Aquaculture will also have a large impact on the major freshwater and the coastal saltwater species that have been most affected by changes in water quality and habitat. The reasoning for this is relatively straightforward. If a particular species currently commands a high price in the market place or if there are indications that reduced availability in the future will cause price increases, these are the species that will be prime candidates for aquaculture.

There are three major areas to consider when trying to forecast future growth in aquaculture production in the United States. The first is physical attributes. The considerations for each species include temperature requirements, whether it uses fresh or salt water, reproductive success in a farmed situation, type of feed required, growth rates to market size, and susceptibility to diseases at acceptable stocking densities. If the species is nonnative, are there concerns about its possible introduction into the local environment?

A second set of considerations involves the present supply of the targeted species. These considerations include such areas as: the current stock estimates and harvesting yields if the species is a native, whether the population and harvest have been decreasing over time, whether the species is chiefly targeted by recreational or commercial fishermen, and whether the species is being impacted by environmental changes.

The third set of considerations deal with the available market for the target species. Some of the market factors are: current price level, overall demand, the availability of close substitutes, variety in preparation, whether the species is a regional or ethnic specialty, and whether sales are to restaurants or retail markets.

Challenges Facing the Industry

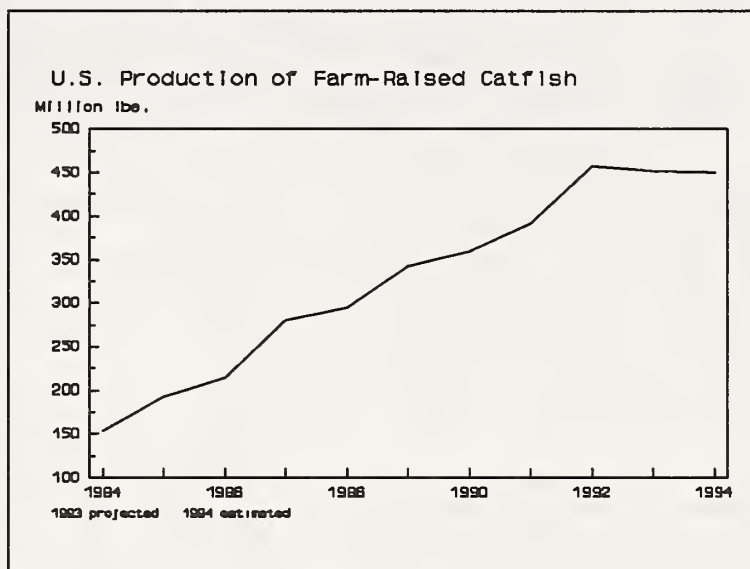
To achieve continued growth, the domestic aquaculture industry will be faced with a number of challenges. One major challenge will be to develop ways to increase consumption of aquaculture products in the face of a slowly recovering economy at home and declines in economic conditions in two of the major export markets, the EC and Japan. While growth in the domestic aquaculture industry up to this point has chiefly been by substituting aquaculturally produced products for wild-harvest product, in the long run the aquaculture industry will need to increase the demand for its products and not simply substitute sales from the

wild-catch industry. As it attempts to increase the demand for its products, U.S. aquaculturalists will also be faced with increasing competition from foreign competitors and continued downward pressure on prices.

Outlook for Finfish

Catfish - At the present time, 1994 catfish production is forecast at approximately 450 million pounds, about even with the projected output for 1993. Processor sales should move in tandem with their purchases and are forecast to be in the 230 million pound range in 1994. This would mark the second year of little or no growth for the catfish industry.

However, there are some signs that growers are beginning to respond to the higher farm prices seen in 1993. Inventory estimates as of the first of October show that the number of fish held by growers is down in most categories compared to a year earlier, but the declines are less than they had been in earlier year-over-year



comparisons. Moreover, the inventory estimate for small stockers was actually 14 percent higher than the previous year. This increase in small stockers will likely not have any affect on the supply of food-size fish until at least the second quarter of 1994. Another positive factor is that growers' reports of the number of fish they stocked in the third quarter was substantially higher in all three categories (large and small stockers, and fingerlings), when compared to a year earlier.

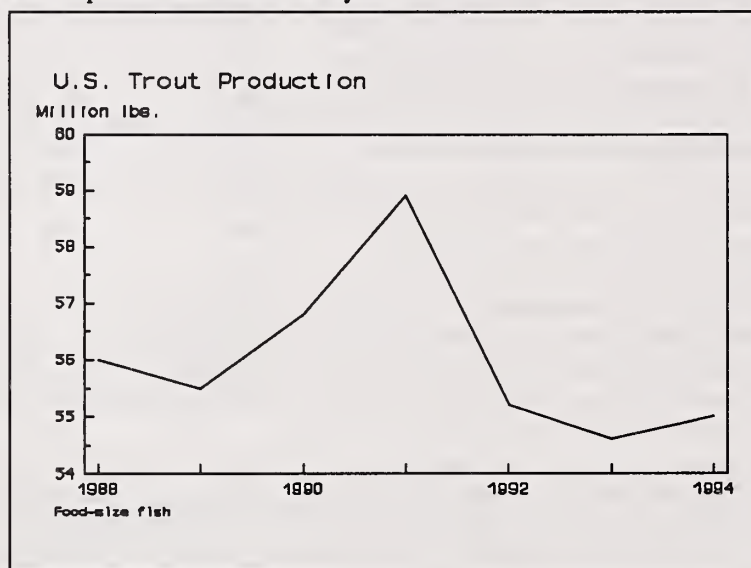
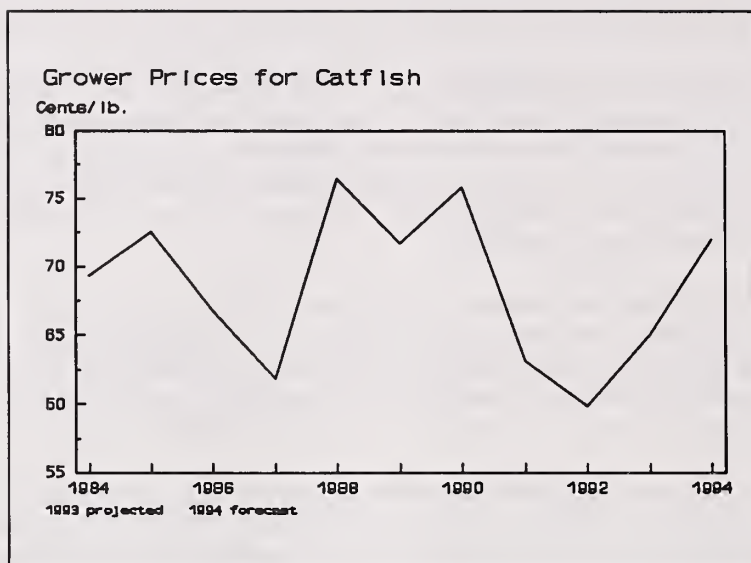
In total, supplies of food-size fish should remain relatively tight through at least the first quarter of 1994. Any large scale increase in supply would likely not occur until the end of 1994 and then only if growers significantly increase their stocking rates in the spring of 1994.

Farm level catfish sales are projected to be down slightly in 1993. However growers have benefited from higher farm prices which should average 16 to 19 percent higher than the previous year. In 1994, with growers' supplies of food-size fish remaining tight, the farm price for catfish is forecast to average close to its present 72 to 73 cents per pound. These prices should be profitable for most growers and provide some incentive to expand production, but due to the time lag between hatchery production and growout to market size, any large rise in the availability of food-size fish will likely not show up until late 1994 or early 1995.

Trout - Overall production of food-size trout has remained basically flat since 1988, varying only between 54.6 and 58.9 million pounds. During much of this period, prices for food-size trout have fallen. Although average farm prices for food-size fish increased to 99 cents a pound in 1993, this is still 4 cents a pound lower than in 1988.

The outlook for domestic trout production in 1994 is for production to remain close to 55 million pounds. However, since no inventory estimates are collected from the trout growers it is difficult to accurately forecast future production. A second factor clouding the forecast is that many of the major trout producers are vertically integrated, so that sales of trout eggs in one year are not an accurate indicator of what production will be the following year. Prices for trout products may be under some downward pressure in 1994, due to the larger supplies of salmon products that will be available. Trout and salmon products are not interchangeable, but the forecast large supplies and falling prices for salmon products will impact the trout market.

The trout industry could be aided if the economy strengthens further. A stronger expansion in the economy would likely increase business at restaurants, which are a prime outlet for trout products. Over the longer run



the trout industry needs to actively develop new markets for their products and to keep exploring different ways to increase their productivity, to stay competitive with various products from both the domestic and foreign salmon growers as well as products from foreign trout growers.

Salmon - During 1994, world and U.S. salmon markets will be heavily influenced by the large U.S. wild salmon harvest in 1993 and the continued rise in farmed salmon production, especially in Norway and Chile. Preliminary estimates are that the 1993 sockeye landings in Alaska set a record, topping last year's 347 million pounds. Farmed salmon production in

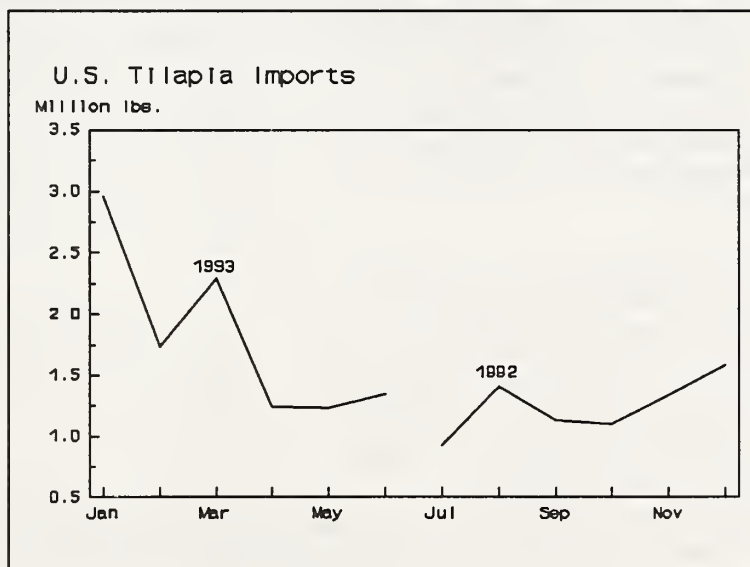
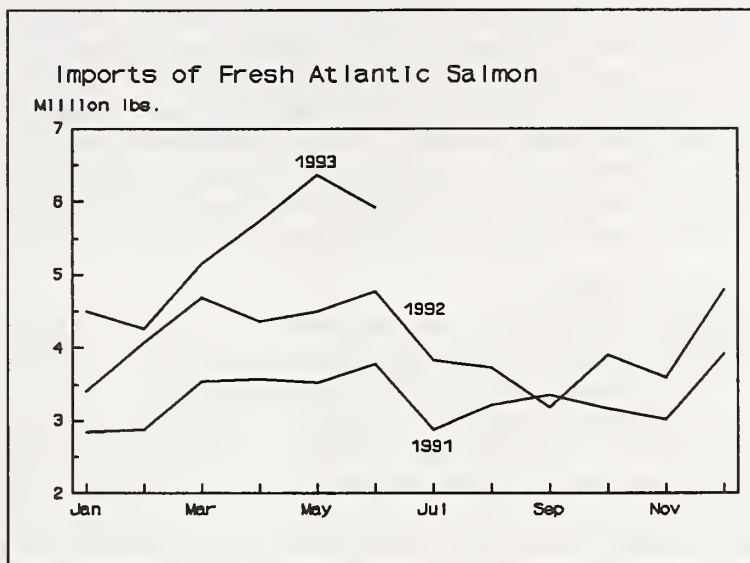
Norway and Chile has been projected to be upwards of 500 million pounds in 1993. The combination of these factors will likely keep downward pressure on most salmon prices until at least mid-summer 1994.

A significant change in the salmon market in the long-term may come from the farmed sector, where Norwegian salmon producers reportedly are working on new production techniques that could yield large increases in efficiency. American salmon farmers will need to match any new production advances to stay competitive. If these reductions in production costs are realized it may start to move farmed salmon products out of the luxury market and into the reach of a much larger group of people. If this is the case, salmon producer and marketing groups will have to develop new ways to promote salmon consumption outside its traditional markets.

Tilapia - During the third quarter of 1993 the United States imported over 5 million pounds of tilapia products, an increase of 56 percent over the same period the previous year. For 1993 tilapia imports are projected at 21 to 22 million pounds, larger, on a quantity basis, than the amount of frozen salmon that the United States will import.

The outlook for 1994 and beyond is for rising imports of tilapia products, in addition to increasing domestic production and falling real prices. As more foreign operations begin producing tilapia and marketing them in the United States, domestic producers will be pressured to maintain sales. Domestic growers will have to develop marketing

niches for themselves. They will need either a quality difference or some marketing advantage that will offset the lower production costs that foreign producers will likely enjoy. How far tilapia production can expand in the United States will hinge on the answers to a number of questions. Can low cost feeds be developed? Can economically efficient densities be maintained in production systems without incurring higher disease rates? Can the current ethnic markets for tilapia be enlarged to accommodate higher domestic production? Can new products be developed that will provide domestic growers with a wider market?



Other Species - Over the next several years, with increasing pressure on fresh and marine resources, there will be expanding incentives to examine the possibility of farming different species. As aquaculture expands, a number of newer species will become successful segments of the industry. A number of these species are already being produced in relatively small quantities, some commercially, some for research purposes. The hybrid striped bass industry is a successful example of an industry that was established because of harvesting pressure on wild stocks. Although not a large industry, it is now fairly well established as a consistent year-round producer. A number of other species are still in the formative stages, with growers experimenting with different growout and marketing strategies to determine which configuration might yield a profitable business.

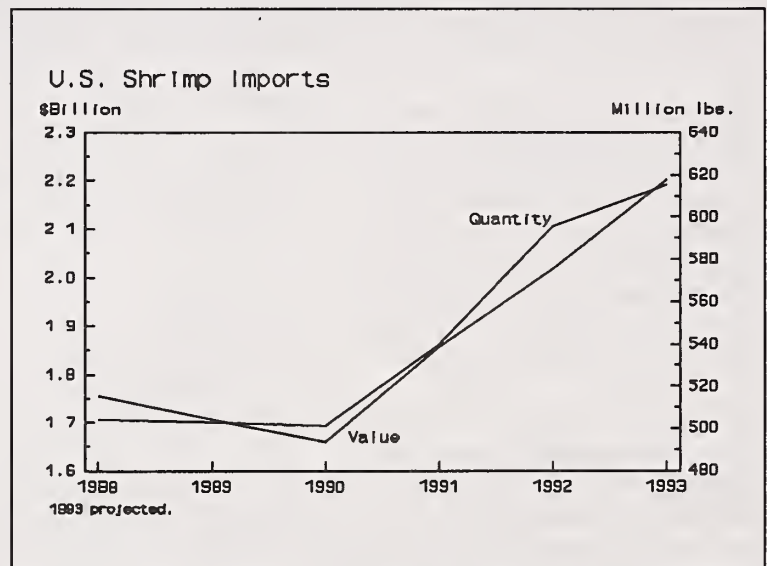
Outlook for Shellfish

Crawfish - The outlook for crawfish over the next several years hinges on a number of factors. First, can the Louisiana industry continue to expand their export market? Exports of crawfish have risen over the last several years, but the market still has a short season and shipments go almost entirely to Sweden. Second, how high a price differential will large crawfish receive? A large price differential would favor crawfish farmers as the size of crawfish is chiefly a function of stocking density. While large crawfish could still be taken in the wild, farming operations would be better suited as consistent suppliers of large crawfish due to their control over the density of crawfish in the ponds. Third, will there be any changes in rice acreage in Louisiana? Many rice growers double crop crawfish. Fourth, will imports of crawfish from China continue to grow and will it put downward price pressure on Louisiana production or expand the market by developing new customers? Currently, imports are only a very small portion of total consumption. Fifth, there is the continuing question of whether crawfish consumption can be expanded beyond the traditional markets in the Southern States?

Shrimp - For the foreseeable future, domestic farm-raised shrimp production will continue to be only a small portion of the U.S. shrimp market. Some shrimp will continue to be grown in South Carolina, Texas, and Hawaii, but it will be either for local consumption or specialty markets.

The development of the domestic shrimp farming industry may depend on the success of projects to commercially produce disease-free shrimp post-larvae for shipment to other growing areas. At the present level of technical development, domestic producers probably will not be able to compete with foreign producers strictly on a price basis.

Shrimp prices in 1994 will likely be higher as several major shrimp farming countries have been experiencing production problems. Production for the current year is estimated to be down in Ecuador and Indonesia. The shrimp crop in China by various accounts has been terrible, impacted by a yet unknown disease. Since the Chinese crop is harvested in the fall the impact will not be fully seen until the beginning of 1994. Besides raising prices, the production shortfalls should increase imports from other Asian countries, mainly those that rely on wild-harvesting.



Mollusks - The outlook for domestic mollusk production in 1994 and beyond is somewhat uncertain. On one hand the wild harvest for a number of mollusk species has been falling, especially oysters. This would normally mean a growing demand for farm-raised production. On the other hand there is continuing concern over the safety of raw mollusk consumption and the need to utilize coastal waters to produce them. Production of the Eastern oyster is especially a concern. This species has been especially hard hit over the last decade by the

widespread occurrence of two diseases. While researchers have developed a number of new systems that would increase the productivity of oyster growing operations, there is still no way to prevent the two diseases. Moreover, no one has developed an effective disease resistant strain of oysters. Clam and mussel growers have not seen the same type of problems that are facing the oyster industry, but they also will have to contend with the many problems of trying to run an aquaculture business in a coastal zone with a number of conflicts over the use of the property. Mollusk farmers will also have to pay attention to competition from foreign producers.

Outlook '94

For Release: Wednesday, December 1, 1993

"AQUACULTURE IS AGRICULTURE"

Joseph P. McCraren,
Executive Director
National Aquaculture Association

Good afternoon, ladies and gentlemen! My sincere thanks to David Harvey and the program committee for providing me the opportunity to visit with you.

By way of background, NAA is the youngest and largest aquaculture association in the United States. It is a grass roots, producer-driven, non-profit organization dedicated to the establishment of policies that further the common interest of its membership, both as individual producers and as members of an industry. NAA currently serves thirty-three (33) diverse national and state associations whose members produce a variety of species including trout, salmon, catfish, ornamentals and shellfish.

Where does aquaculture stand as an industry? What does it have to offer this nation? What is required of government to assist this promising industry in satisfying its potential?

A recent industry analysis by the U.S. Department of Agriculture states that aquaculture production in 1980 was 203 million pounds with a farm gate value of \$192 million. During the 1980's, production quadrupled reaching an estimated 860 million pounds, with a farm gate value of more than \$760 million by 1990. Aquaculture is a growth industry as evidenced by these data.

Our nation's aquaculture producers range in size and complexity from corporations employing several hundred workers to small, family-owned farms, commonly referred to as "Mom and Pop" operations. They farm a variety of finfish, crustaceans, such as crawfish and shrimp, shellfish and aquatic plants. The industry is supported by an infrastructure of feed mills, processing plants, equipment manufacturers and suppliers. The United States industry and its support services account for nearly 300,000 full-time jobs, with a direct and indirect economic impact of \$8 billion. And too, aquaculture supplies substantial quantities of finfish for the recreational fishery.

The potential for this industry, the fastest growing segment of agriculture in this country, is vast. Growth would mean jobs and opportunity to many Americans, particularly to those in our rural areas. It would provide farmers involved in traditional agriculture with a viable alternative. That is the good news!

The bad news is that aquaculture currently accounts for less than 9 percent of U.S. seafood production compared to the world average of 16 percent. In 1990 the United States ranked 10th in world aquaculture production.

Aquaculture will be a major global growth industry of the 21st century. According to current projections, based on anticipated population growth and stable or declining capture fisheries harvest, aquaculture production will have to increase seven-fold to supply the world's demand for seafood by the year 2025. With national commitment and proper planning and support, the United States can realize a major opportunity to develop an important new agricultural industry to serve national needs and the global marketplace. Without such a commitment, the U.S. will continue to depend on imported fish and shellfish which now supply over 60 percent of our seafood needs. Fisheries imports--some \$9 billion annually--constitute the third largest component of the U.S. trade deficit, after petroleum and automobiles.

Please note that I stated "with national commitment and proper planning and support, the United States can realize a major opportunity to develop an important new AGRICULTURAL industry to serve national needs and the global marketplace."

Senator Akaka of Hawaii introduced S.B.1288 in July. The bill is entitled, the National Aquaculture Development, Commercialization and Promotion Act of 1993. The bill addresses a litany of rudimentary needs necessary for this industry's future.

Among these is a provision for the coordination and implementation of a NATIONAL AQUACULTURE POLICY FOR PRIVATE INDUSTRY BY THE SECRETARY OF AGRICULTURE. This is appropriate as aquaculture is recognized as agriculture world-wide and should be viewed no differently in our nation.

Further, cultured aquatic plants and animals would be treated as livestock and agricultural commodities. This is important as it relates to programs of the Department of Agriculture and industry. Important, as well, is Section 8, wherein reference is made to a Departmental Office of Aquaculture to not only support private aquaculture development but to "coordinate all interdepartmental functions and activities relating to private aquaculture." We need a Departmental focus and infrastructure sensitive to this industry, with a budget reflective of its needs. We have an administration and a Secretary who know and understand aquaculture. Their support is critical.

More specifically, what has USDA provided this industry? More importantly, what can it do on its own volition for this industry?

USDA funding in support of the aquaculture industry has traditionally occurred as follows:

1) Congressionally directed (e.g. Special Research Grants), 2) competitive research grants, programs, and 3) via formula-funded programs (Hatch Act, et al., available at the state's discretion, the land grant institutions).

In FY '92 USDA support for aquaculture from all sources amounted to nearly \$23 million, the vast majority of which were for research within CSRS and ARS. Included within this sum were Congressionally directed funds for the Regional Aquaculture Centers. Support within USDA was made available by CSRS, ERS, FAS, APHIS, ARS, ES, NASS, and NAL. Emergency funds were made available by the administration and administered by ASCS in FY '93 in support of disaster relief to farmers.

Through FY '93 aquaculture related proposals have competed successfully for research funds principally via the Small Business Innovative Research and National Research Innovation programs. However, obtaining funds in this manner is not the same as having a Departmental budget! We are encouraged, however, by the fact that for the first time, the administration has seen fit to support our industry by including \$4.1 million in the FY '94 budget for the Regional Aquaculture Center program. This is a beginning.

Efforts are being directed on several fronts to improve and sustain industry funding:

- A departmental strategic plan has been drafted by Science and Education's Aquaculture Committee. It is undergoing Departmental review. The draft spells out the need for a coordinated program in support of industry. Further, it urges departmental acceptance of aquaculture as an agricultural endeavor and strong Departmental leadership.
- A draft administration bill amending and reauthorizing the National Aquaculture Act (reauthorized in '90) is currently undergoing Departmental review. The draft language specifies a strong leadership role for USDA in private aquaculture.
- The USDA aquaculture office is working to ensure coordination between the administration and Congress on legislative initiatives in support of aquaculture.

It is apparent to my industry, that an important first step in gaining parity within USDA is the Department's acknowledgment of aquaculture as a form of agriculture. And that the animal and plants cultured thereby and the resultant products, be viewed as livestock, crops, and agricultural commodities.

Aquaculture is agriculture! Thank you.

Outlook '94

For Release: Wednesday, December 1, 1993

**THE EVOLVING ROLE OF THE FOREIGN AGRICULTURAL SERVICE IN
SEAFOOD PROMOTION**

Joel Chetrick, Marketing Specialist
Dairy, Livestock, Poultry Division, Foreign Agricultural Service
and
Steve Beasley, Seafood Analyst
Dairy, Livestock, Poultry Division, Foreign Agricultural Service

I. USDA Agricultural Export Assistance & Development Programs:

USDA offers a variety of export assistance and development programs which are available to promote exports of U.S. edible fish and fish products. In recent years, our market development work for fish has expanded in response to increased industry needs and interest in boosting exports.

Fish have been eligible for inclusion in USDA export programs for a number of years. In 1984, P.L. 98-623 specifically authorized the inclusion of fish in P.L. 480 and any export program authorized by the Commodity Credit Corporation (CCC) Charter Act (such as the GSM-102 Export Credit Guarantee Program and the Targeted Export Assistance Program which was succeeded by the Market Promotion Program in FY 1991) without regard to whether the fish were harvested in aquaculture operations.

Cumulative CCC funding since FY 1986 for the Targeted Export Assistance Program and the Market Promotion Program (MPP) has totaled about \$40 million in support of private sector overseas market development for fish exports. Fiscal Year 1993 MPP funding for fish and seafood promotions totaled about \$8 million.

MPP Participants undertake a variety of promotion activities including market research, trade and consumer advertising, in-store promotions, recipe development, and other activities targeted at both consumers and trade in foreign markets. Major targeted markets are Japan, Korea, Australia, and several European countries.

The MPP includes export promotion programs for several fish species and aquaculture products, including Alaskan Salmon promoted by the Alaska Seafood Marketing Institute, Surimi promoted by the United States Surimi Commission, and squid promoted by the Southeastern Fisheries Association. Seafood promotions also are handled by state-regional groups including the Western U.S. Trade Association and the Eastern U.S. Agricultural and Food Export Council, Inc.

One of our newest Participants is The Catfish Institute which began MPP activities in 1993 and is working to develop the market for U.S. farm-raised catfish in Germany. Aquaculture products promoted abroad also include farm-raised crawfish and alligator hides which are coordinated by the Southern United States Trade Association.

In addition, the CCC's GSM-102 Export Credit Guarantee Program provides exporters of U.S. agricultural products with U.S. Government coverage of commercial financing on terms of up to three years. This program also is available to exporters of U.S. fish and fish products. It is used to encourage exports to middle income countries where normal commercial financing may be difficult to obtain.

As previously noted, fish and seafood products may be programmed under P.L. 480. For FY 1994, Atlantic mackerel and Atlantic dogfish were included in the list of commodities eligible for P.L. 480 programming.

FAS also helps exporters participate in foreign trade shows. Our Trade Show office organizes U.S. pavilions at major international trade shows and can provide U.S. exhibitors with a booth, advance publicity, product shipment, and assistance with customs clearance. Some of these events are the ANUGA show in Germany, SIAL in France and the Great American Food Shows in Japan and Korea.

Lastly, FAS has several information and promotion services to assist U.S. exporters including Trade Leads in foreign markets, Foreign Buyer lists for specific products, and our Buyer Alert newsletter which offers low-cost advertising for U.S. exporters to introduce their products to foreign buyers. All of these publications are available through the FAS AgExport Connections office in Washington.

The U.S. fish and seafood industry continues to look abroad for new export opportunities. FAS is ready to help. Our programs provide useful information and tools for expanding exports. We hope to make the industry more aware of what we have to offer.

II. USDA INTERNATIONAL SEAFOOD REPORTING AND ANALYSIS:

Good afternoon, it is a pleasure to be here today.

Joel has given you a brief update on FAS's current activities in supporting seafood promotion, and it's clear that our Agency's role in this area has expanded rapidly with the introduction of legislative language defining seafood as a *bona fide* U.S. agricultural product.

Seafood is now eligible for a variety of USDA promotion and credit programs ... we are working with a very diverse group of seafood products ... and our participants are targeting some of the most important overseas seafood markets.

Yet FAS, as defined in the Farm Bill, also has some very specific information gathering functions. Quite simply, FAS reporting and analysis work is the *foundation* of everything else we do in the Agency. It's not glamorous, it's not sexy, but it is essential to allow our policy-makers to make sound judgements and decisions about market development programs, export assistance activities, and trade policy.

An *independent* FAS analysis capability provides the underpinning that the Agency needs to support its program decisions on the basis of the best and most current information available. The alternative is to rely on data not specifically targeted to these requirements. FAS is now committed to establishing a viable reporting and analysis function within the Agency.

So, what have we done and where are we going with this work? I can report to you today that FAS has recently implemented a plan to require timely, in-depth, and forward-looking international seafood reporting.

As it currently stands, we have proposed that 16 of our overseas posts provide semi-annual reports on production, supply, and demand for 13 seafood commodity aggregates. We now have a comprehensive set of reporting instructions that were developed with detailed industry and inter-Departmental cooperation and input. Efforts were made to ensure that FAS reporting would be complementary with U.S. Government seafood reporting standards, additive in terms of clarifying or expanding reporting beyond what is currently provided, and avoids duplication. Voluntary and alert reports would complement our required agenda.

Encouraging progress has been made on the initiative despite some recent budgetary delays. I plan personally to travel to Japan and France in early 1994 to assist in the launching of pilot reports from those key markets. These reports will be models that other Far Eastern and European posts will follow in coming months.

I can also report that initial groundwork has begun in several other countries by FAS officers and foreign national employees to establish the industry contacts, governmental relationships, and industry savvy to carry out this challenging new task.

More encouraging, Washington has recently received several voluntary reports from posts which we promptly made available to the public through our reporting office and the seafood media. These reports include an excellent and up-to-date analysis of the groundfish market in Portugal and a comprehensive report on the farmed salmon and sea urchin industry in Chile.

We are excited about these first reports in that for the first time ever, seafood reports are being prepared in accordance to FAS's standardized three-year GEDES production, supply, and demand format. What this means is that our posts are making *projections* about seafood market conditions to come, not just accounting for trends two or three years old. I think you will find that this "forward looking" approach to reporting is what distinguishes our Agency and makes our reports powerful marketing tools.

In closing, I must caution that FAS cannot promise the industry miracles. We have embarked upon a very ambitious reporting agenda focusing upon the most important markets and commodity aggregates in terms of export value. Due to resource constraints, it is unlikely that we would be able to provide everything everyone wants immediately.

Even so, we view our work as long-term and evolving. We will attempt to be *fluid and open* to industry suggestions to provide the information exporters need. If this means rearranging our reporting mix and/or focus, we shall do so.

Thank you *very* much for your attention and I am open for questions if you have any.

Outlook '94

For Release: December 1, 1993

THE U.S. SUGAR OUTLOOK

Edmond Missiaen
Chairperson, Interagency Sugar Estimates Committee
World Agricultural Outlook Board

Most of you know USDA's official outlook for the U.S. sugar situation -- you saw it in the November WASDE report. Many of the decisions you make are based upon expectations of Government actions. We want you to have the same data that Government officials use when they are making policy decisions. Today, I would like to look behind the numbers we published; to explain why our forecast is where it is.

Production

Let's start with our sugar production outlook. Keep in mind that USDA's supply and use forecasts are based on a fiscal year: Oct. 1 through Sept. 30. Thus, new crop cane or beet sugar produced in September, 1993 is put into the 1992/93 year, not the new season. It also complicates the picture for sugar from over-wintered beets in California. Nevertheless, the overlap between the biological crop year, as defined by the NASS, and the fiscal year tends to be small, and we use crop year cane and beet production when forecasting fiscal year 1993/94 sugar production.

we are expecting U.S. sugar output in fiscal year 1993/94 to drop 5½ percent from last year's record -- that's more than 400,000 short tons, raw value (STRV). However, if realized, it will be the second highest output in history.

Cane sugar production, for states other than Hawaii, is based on the NASS sugarcane production forecast, less the Interagency Committee's estimate of cane used for seed, times the average recovery rate for the past 5 years.

In Louisiana, sugarcane yield is a bit below the average of recent years because of dry weather in July and August in part of the growing area, an early frost, and rainy weather which has adversely affected the harvest. There also is a high proportion of stubble (ratoon) cane this year. In Hawaii, production this fiscal year is expected to approximate last year. Next fiscal year, however, could see a big decline as 2 mills, which account for about 17 percent of output, shut their doors. In 1995 another mill, accounting for about 9 percent of current production, will close.

USDA's fiscal year beet sugar production forecast is based on the latest NASS sugar beet production forecast, plus above average recovery of sugar from beets, plus increased de-sugaring of molasses. Our forecast is lower than forecasts based on the sum of what each beet sugar company predicts it will produce. USDA/ASCS and private analysts have collected this information. However, sugar production as high as these forecasts, combined with the NASS sugar beet production forecast, would imply beet sugar recovery similar to last season's record high. That is unlikely.

Our forecast for above average recovery takes into account recovery and sucrose content information obtained from sugar beet processors, plus the high production forecasts of the individual firms.

Flooding and rain in the Midwest this summer adversely affected sugar beet crops in Southern Minnesota and the southern end of the Red River Valley. Yields in these areas were as low as or lower than those during the 3 recent drought years.

When forecasting beet sugar recovery rates, we net out sugar produced from de-sugaring of molasses via ion exclusion technology. We are conservatively forecasting that 245,000 STRV of sugar will be produced from de-sugaring of molasses in the 6 ion exclusion plants that will be operating this year. This is a net gain of 220,000 tons after we subtract sugar that would have been produced by Steffens process facilities that were closed when one of the ion exclusion plants was set up. The operation of these 6 de-sugaring plants is likely to add at least eight-tenths (0.8) of a percentage point to this season's beet sugar recovery rate.

Imports

Assuming no change in the tariff-rate quota for imports, this year's total imports will be the lowest since 1987/88. Sugar entering under the 2 sugar re-export programs allow additional flexibility for refiners and some sugar users. In the short run, refiners can "borrow and lend" sugar between their domestic and re-export accounts. Our forecast, at this early stage of the fiscal year, implies a balance between imports and exports in the re-export program.

In the July-September quarter of FY 1992/93, sugar users in the sugar-containing products re-export program apparently "borrowed" sugar from the program for domestic use. That is why we are forecasting less activity in that program this year.

Sugar arriving in this country embedded in sugar-containing products is not included in USDA's import estimate. If you assume that the re-export program accounts for most U.S. exports of sugar in sugar-containing products, then U.S. imports of sugar in sugar-containing products were more-or-less double equivalent exports in 1992/93. These imports were equivalent to about 20 percent of sugar imports under the tariff-rate quota last year. About two-thirds of imports of sugar in sugar-containing products are not restricted by Section 22 quotas.

Deliveries

During the past 5 years, the average increase in U.S. sugar deliveries was 2.0 percent. All other things being equal, we would have forecast an increase for 1993/94 of 2 percent -- equal to the recent years' average. However, not all is equal. We also are forecasting a very low stocks-to-use ratio. So, assuming that the demand for sugar is just a tiny bit price elastic, we are forecasting a deliveries increase of 1.7 percent.

During the past 5 years, the average increase in U.S. HFCS deliveries was 3.0 percent. Our conservative forecast is for a 2.6 percent increase in HFCS use in 1993/94. Fifteen to 30 percent higher corn prices this year will take a toll on corn wet miller margins. On the other hand, the competition between HFCS and high intensity sweeteners for the beverage sweetening market has cooled. In the past 3 years, diet drinks' share of total soft drink consumption has stagnated near 30 percent.

Stocks

When we put together all of our forecasts for the different pieces of the sugar supply and use puzzle, we are left with ending stocks of only about 1 million short tons. This is about 600,000 tons less than total ending stocks last season, and 400,000 tons less than "non-blocked" ending stocks last season. It's even worse than that! My colleagues in ASCS have been researching the 169,000 tons of "miscellaneous" in last year's supply and use, and have concluded that most of it is stocks that were held by intermediaries.

Price

Ending stocks in the one million ton neighborhood would imply 1994 summer quarter #14 contract raw sugar prices above 24 cents per pound -- more than 2 cents above the current price. Beet sugar prices remain high, thanks to a smaller crop and less pressure on storage facilities. However, they have eased a bit in recent weeks, partly in response to more aggressive selling by cane sugar refiners.

Given the normal seasonal pattern, we would have seen a sharp decline in HFCS prices in October. In recent weeks the price slipped a little, but it is staying unseasonably high -- 2½ to 3 cents above last year -- mostly in response to the high corn price. The high beet sugar price also has influenced HFCS prices.

We know that basic supply and demand parameters affect sugar and HFCS prices, but in the United States, as well as many other countries, government action is the single most important element in setting the factors related to supply.

We know that marketing strategies, such as the beet sugar industry's aggressive selling last year, also affect price. What is the role of industry structure in price determination? This season, the 4 largest suppliers of sugar to the U.S. market will control over 70 percent of the nation's production capacity. On the demand side, the ups and downs of the economy may affect the price. Weather can affect the demand for soft drinks.

Long Run Outlook

We in the USDA Interagency Sugar Estimates Committee have been making long term projections of U.S. sugar supply and use for many years. This year, for the first time, we are sharing them with you. Assuming a continuation of present policies, we see production increases limited by the threat of allocations. Also, declines in Hawaii, and the Everglades settlement in Florida will stall increases in cane sugar output.

On the demand side, how much longer can consumption increase at a 2 percent per year clip while population growth is less than 1 percent? Eventually, this rate of growth will diminish. Our projections do not include a new GATT agreement, but down the road, trade liberalization is likely to affect U.S. sugar supplies.

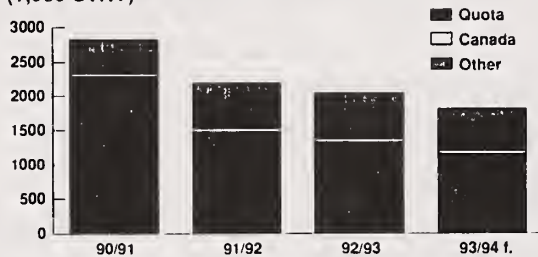
U.S. Sugar Production, Fiscal Years (1,000 STRV)

Average 87/88 - 91/92	1992/93	1993/94	Change
Cane Sugar			
3,248	3,439	3,430	---
Beet Sugar			
3,677	4,392	3,970	-10%

Beet Sugar Recovery

Season	Total	Excluding Molasses
Avg. '87/88-91/92	13.8%	13.6%
1992/93	15.5%	14.9%
1993/94 f.	14.9%	14.1%

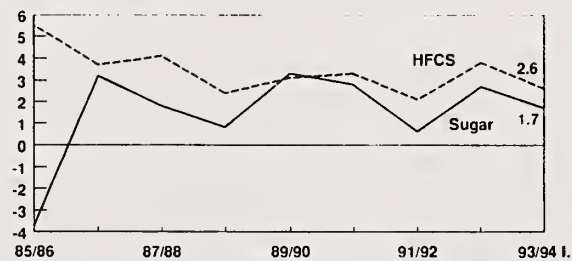
U.S. Sugar Imports (1,000 STRV)



Imports of Sugar-Containing Products (1,000 STRV, Approx. Sugar Equiv.)

Category	1989/90	1990/91	1991/92	1992/93
Section 22	19	36	71	80e
Others	34	58	103	180e
Total	53	95	175	260e

U.S. Sugar & HFCS Deliveries (Percent Change)



Outlook '94

For Release: Wednesday, December 1, 1993

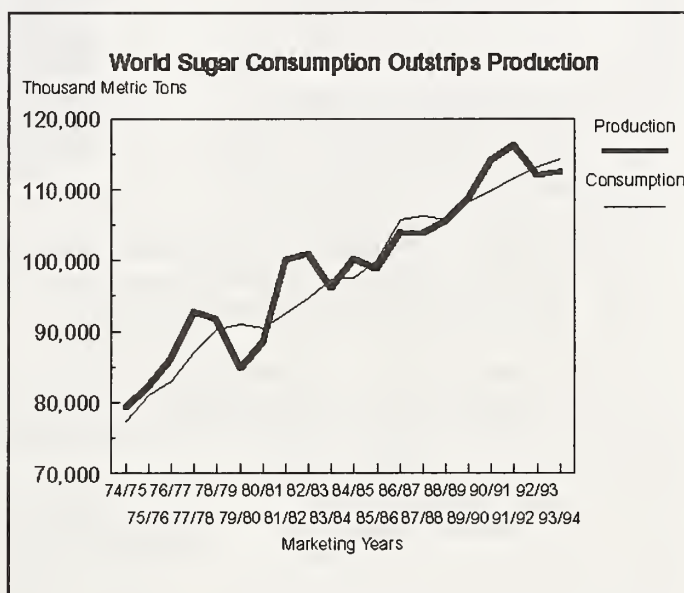
DEVELOPMENTS IN THE GLOBAL SUGAR INDUSTRY

Craig Jenkins
Sugar Analyst, Foreign Agricultural Service

Production

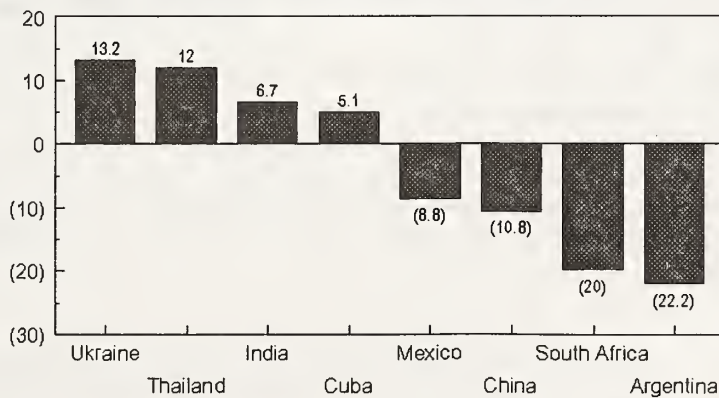
World sugar production for 1993/94 (September/August) is forecast at 112.4 million metric tons, down 294,000 tons from the forecast published in the June *World Sugar Situation and Outlook*, and up 404,000 tons from the 1992/93 crop. Since the June report, lower production forecasts for India, China, and South Africa more than offset significant upturns for the European Community as well as Ukraine.

The production outlook for 1993/94 compared with 1992/93 indicates a deterioration in the output of several of the largest sugarcane producing countries--China, Mexico, South Africa, and Argentina. Chinese sugar production is forecast down 10.8 percent in 1993/94 to 7.4 million tons. Sugar production from cane is down 11.3 percent, mainly due to depressed prices and low economic returns versus alternative crops and land uses. Sugar production from beets is down 9 percent, as farmers have switched to alternative crops, mainly soybeans, due to higher returns. Mexican sugar production for 1993/94 is forecast at 3.95 million tons, down almost 9 percent from last year's 4.33 million tons which was unusually high due to ideal growing and harvesting conditions. In South Africa, the effects of an extended drought worsened and the new crop production forecast has been lowered to 1.28 million tons. This compares



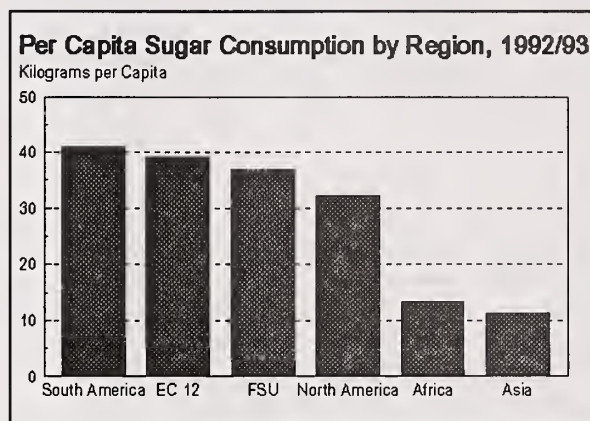
Forecast Production Change 1992/93 - 1993/94

(Percent Change by Selected Country)

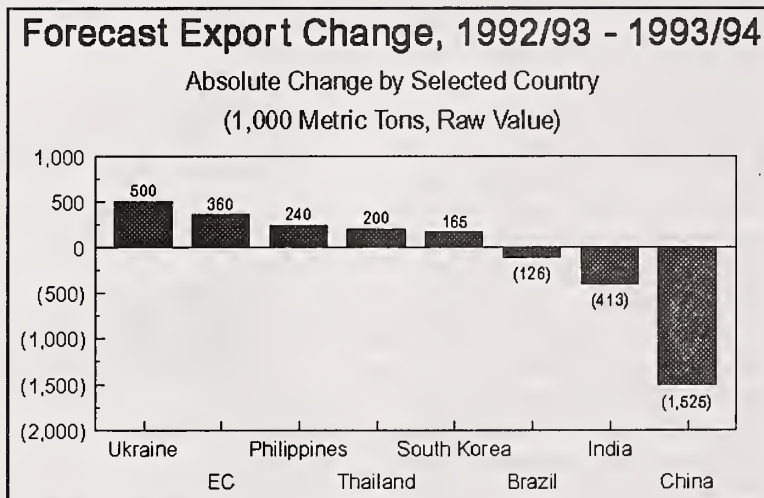


with crops of 1.6 and 2.43 million tons the previous 2 years and has forced South Africa, normally a sizeable exporter, to import sugar. Argentine sugar producing provinces were hit by heavy frosts in July, reducing 1993/94 forecasted output to 1.05 million tons, 22 percent below last year and 32 percent below 1991/92.

Sugarcane producing countries whose sugar production is forecast to increase in 1993/94 include India, Thailand and Cuba. Indian sugar production is expected to recover somewhat from last year's drought-reduced crop of 12.5 million tons to 13.3 million tons, including 894,000 tons of khandsari sugar, reflecting a generally excellent monsoon and higher cane prices. Thai sugar production in 1993/94 is forecast to be up 12 percent to 4.2 million tons, despite drought early in the growing season, from last year's devastated crop of 3.75 million tons. Attractive cane prices and the continuation of advanced payments provided by mills have encouraged some expansion of cane area in 1993/94. Furthermore, adequate to good rainfall in recent months is expected to boost sugarcane yields. Cuba's harvest will again be hampered by insufficient rain and fuel shortages. This year's production, forecast at 4.5 million tons, is not expected to be much improved from last year's disastrous crop of 4.28 million tons. Sugar production in future harvests may be boosted by the establishment smaller cooperative farms. However, it is uncertain what effect the reforms will have on this year's crop.



For sugarbeet producing countries, 1993/94 harvesting and processing has begun. U.S. sugar production is expected to be off 5.5 percent to 6.7 million tons due to lower beet sugar production partly caused by reduced yields and losses from severe flooding in the upper Midwest this summer. The European Community is expected to produce 16.7 million tons in 1993/94, up 6 percent from the June forecast, reflecting improved crop prospects in France, Germany, the United Kingdom, and other countries where growing conditions have improved yields and sugar recovery rates have more than offset less area harvested. Ukrainian sugarbeet yields and area planted to beets are up sharply this year. Thus, sugar production is forecast at 4.3 million tons, 13.2 percent above last year, despite a lower sugar content this year. The sugarbeet harvest is plagued with problems however, and sugar production may be lower than forecast.



Consumption

Global consumption for 1993/94 is forecast at 114.2 million metric tons, up 1 million tons, or 1 percent, from 1992/93. Consumption will exceed production for the second year in a row, causing significant stock drawdowns. Over the past 20 years, global sugar consumption has grown about 2 percent annually, reflecting population growth, as well as the stability of the human diet, and sugar's role as a staple in most of the world. The lack of substantial growth in 1993/94 is due to a drop in sugar use in the countries of the former Soviet Union and Eastern Europe, as well as generally slow consumption growth in the rest of the world, apart from Asia, due to global recession. Despite rapid growth in sugar consumption, Asia has the lowest per capita sugar consumption of any region.

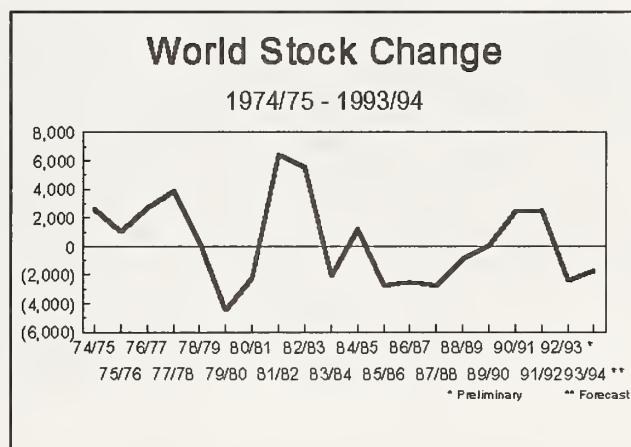
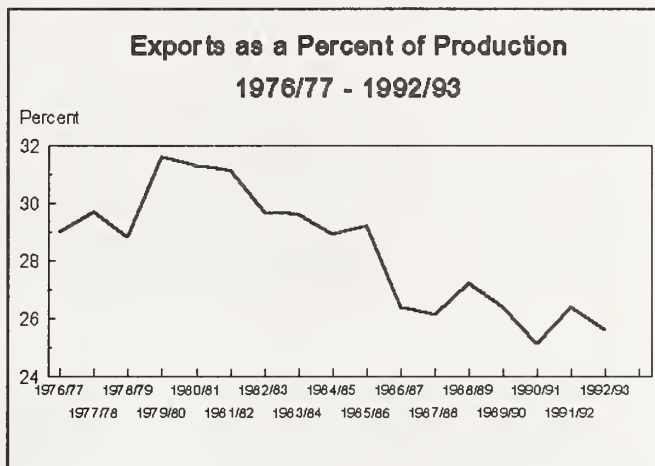
Trade

World trade volumes are forecast to remain at 28 million tons. Following the long-term downward trend, about one-quarter of global sugar production is expected to be traded in 1993/94. The world's seven largest exporters--the EC, Cuba, Australia, Thailand, Brazil, China, and Ukraine--are expected to account for almost 75 percent of the global exports. Ukrainian exports are expected to increase 500,000 tons, though they may be lower given the uncertain production prospects. EC exports are expected to increase 360,000 tons due to generally favorable weather. In contrast, China's exports are forecast to plummet from 1.5 million tons to 700,000 tons as farmers switch out of sugarcane. India's exports are forecast to fall to nearly zero from over 400,000 last year and is expected to require imports of 300,000 tons. As was the situation in 1992/93, Cuba is expected to export around 3.7 million tons, down by more than one-third from 1991/92. South Africa will not export sugar this year as the devastating drought continued in 1993.

Global sugar imports are less concentrated than exports, but the top seven importers--Russia, the EC, Japan, the United States, South Korea, Canada, and Algeria still account for almost 44 percent of the total. A substantial share of the remaining sugar imports is expected to go to the countries of North Africa and the Middle East. For 1993/94, sugar imports into North Africa and the Middle East are forecast to total 2.4 and 3.6 million tons, respectively, together accounting for over one-fifth of global imports.

Stocks

Global consumption will again outstrip production this year by a forecast 1.85 million tons. Last year consumption exceeded production by 1.3 million tons. The outlook for 1993/94 is for a further drawdown of



stocks by a forecast 1.86 million tons to 20.2 million after last year's drawdown of an estimated 2.4 million tons. The stocks-to-use ratio is foreseen contracting to 17.7 percent, even lower than the 18 percent ratio in 1989/90 when world prices averaged 13.9 cents a pound.

¹In this report, world sugar estimates are given in metric tons equal to 2,204.6 pounds or 1,000 kilograms. All estimates are expressed in raw value, unless otherwise specified. It takes 107 pounds of sugar raw value to produce 100 pounds of refined sugar.

BEET SUGAR ECONOMICS - THEN AND NOW

David Berg
Director of Market Information
American Crystal Sugar Company

Good afternoon. I'm pleased to be able to speak to you today. Every year, I look forward to coming to the Outlook Conference because so many people who are so knowledgeable in sweeteners show up. You can always count on hearing thought provoking concepts and unique analyses of the issues challenging the industry. And that's just out in the hallway between speeches! My hope is that I can leave you with enough concepts and analyses to carry you to your next hallway conversation.

My subject today, "Beet Sugar Economics" might send some of you heading for the door. But please hold on long enough to hear my basic hypothesis: The beet sugar industry has turned a corner in recent years. It no longer is driven--it CAN'T be driven--just by the economics of slicing beets and loading sugar into a railcar. The industry has come to grips with the long ranging consequences of what happens AFTER the sugar leaves the factory. Naturally, turning the corner from a growing and processing focus to an integrated production and marketing approach has significant immediate consequences for buyers and competitive sellers. But what I'd like to address today are some of the longer term issues that will come into play as this change progresses.

I can't talk about the "now" in the beet sugar industry without first talking about the "then". The main reason for this is because most of the "then" is still with us. What I mean is that even though we are investing in the downstream end of our business, we remain processors of an agricultural commodity--sugarbeets. And in case anyone thinks that weather doesn't have anything to do with the sugar business, I'd like to direct them to Joe Lucas for an update on what happened to his crop in the last three years.

Joe works for United Sugars Corporation, the joint marketing arm of the three Red River Valley sugar cooperatives. Until about a month ago, he worked for North Central Sugar, which was the selling pool for Minn-Dak and Southern Minnesota Sugar. This graph shows three years of what weather can do to a beet company. 1991 was pretty much average. 1992 was excellent. 1993 was.... Well, the growers at these two co-ops haven't yet come up with an adjective that describes 1993. The point here is obvious. Weather is, and will remain, a major driver in determining a beet processor's presence in the marketplace. Obviously volume and price will swing with the weather. But something just as critical in the long term sense will also move. That is the supplier's standing with its customer base. More on this later.

Variability doesn't end with beets being piled in the factory yard, of course. Processors all over the western United States can tell horror stories about piles going bad during the 1991 crop campaign. That's one more factor to add to the list of variables that can't be pinned down. But on the positive side, the industry has pushed forward in terms of developing more sugar in each beet, and getting that sugar out once the beet is sliced. This graph illustrates the beet sugar extraction rate--very simply the percentage of total beet tonnage that is turned into sugar. This measurement rolls together what happens in the field, the pile, and the factory, and it illustrates significant gains that have been made at all levels.

Plant breeders have made dramatic improvements in the sugar content of beets, and ag managers are working closely with growers at maximizing these potential gains. Beet storage practices have been improved. During our recent harvest, American Crystal's ag staff ran an "electronic beet" through the pilers to track handling and impact on eventual sugar recovery.

Inside the factory, rapid developments in process automation continue to move the extraction curve higher. And the effect of molasses desugarization has been well documented. About one point of the extraction percentage--300,000 tons raw value of this year's crop--is attributable to molasses desugarization.

The positive about increased extraction is, naturally, a more cost-efficient operation from field to bin. Without these efficiencies, the sugar industry simply would not survive year after year with no change in the 18 cent loan rate. There is a negative, though--a negative that gets right to the heart of whether beet companies have a production orientation, or if they have their eye on the customer's needs as well. Increased extraction means that for every ton of beets sliced in a 24 hour period, there's more sugar to move. Moving it to the market or moving to the warehouse--that's the issue.

This graph shows the swing from year to year in beet sugar production--drops as large as 10 million hundredweight, and increases as large as 12 million. The problem here from a marketing perspective is obvious--how do you build a customer base when your product supply bounces this way? And more importantly, how do you go after those most desirable, top dollar customers when you can't guarantee something as basic as product availability? This is a massive challenge for the beet industry--a challenge that will play a role in determining the future shape of the entire sugar industry.

This graph illustrates another problem associated with producing a year's output in six months or less. It shows the share of market held by beet sugar in the first and second halves of the last five crop years. The pattern is unmistakable--the beet industry's share of market is higher in the first half than in the second half every year. This shouldn't come as a surprise to many of you, unless you just arrived on the 2:30 flight from Mars! But the fact that beets grab market share in the first half and then relinquish it every year isn't what matters.

What matters is how the beets accomplish this--with PRICE. And from the producers' perspective what matters is how long the price effects linger in the market. The highly intelligent, market-savvy buyers who represent our customer base recognize an opportunity when they see one. Sensing a sloppy market, they work their suppliers over and push coverage as far out as they can. Processors, feeling gun shy about clearing storage in the current campaign, book some of next year's sugar at the same low price as they're selling spot sugar for. The current crop year is a prime example. Booking for '93 crop sugar was going on at fever pitch in March and April before the first beets had emerged! Because of this, the market is suffering from a hangover, almost a year after the party.

I've just read a listing of offenses the beet industry has been charged with--and sometimes may have committed--in the past. I would like to spend a few moments explaining why it's not fair or accurate to lay all the blame at the feet of a few companies. Many of you may have heard about the Market Data Survey which American Crystal did about a year ago. One of the most significant discoveries we made in our survey was the way nearly every refined sugar processor in the United States sends sugar into the Chicago market. I'm not telling you something new here--for decades Chicago has been the battleground where price wars have been fought. What might be news to you is just HOW COMPETITIVE the Midwestern regions are, compared to the rest of the country.

This graph shows the share of market held by the market leader in the eight regions we surveyed in our initial Market

Data Survey. The leaders in first two regions--which we defined as the North Central and Illinois/Wisconsin markets--hold 23 and 24 percent of the total market, respectively. Compare that to the 46 and 50 percent held by the market leaders in the Northwest and Southeast regions. Another measure of competitiveness--in the three regions around Chicago, either 9 or 10 individual processors are selling sugar. In the other five regions of the country, the range is from 4 to 7 competitors in each region. "Dog eat dog" isn't even an appropriate way to describe the competition in the Chicago market sometimes. Looking at these numbers, it becomes more understandable why beet sugar marketing gets labeled as "dumping". But the facts indicate that the beet processor would be much less prone to "dump" if it wasn't for the sugar moving into Chicago from literally every corner of the country.

But at the beginning of my presentation I told you that the beet industry has turned the corner--that it can't be driven just by production economics any longer. So now I will turn to what has changed--is changing in the way beet sugar companies approach the market. Much of what I will discuss is the philosophy of United Sugars, but I think that you see strong indicators that similar strategies are in play in other parts of the industry as well.

I want to initially oversimplify the change in thinking in the Red River Valley, and list three obvious factors that will change the way our sugar is marketed.

The first is United Sugars Corporation. The three Red River Valley co-ops will have 25 to 30 million hundredweight of sugar a year in the hands of one seller. By pulling our marketing into one organization, the three co-ops have spread out our crop risk and broadened the resource base we can use to service customers. Everyone associated with United Sugars is excited about the opportunities it presents in terms of market development and enhanced relationships with premium customers.

The second factor is the addition of a large amount of bulk and packaged sugar storage in the Valley. The effects of pushing sugar into the market during processing campaign have not been lost on the shareholders of the three co-ops. Because of this, United Sugars will have significantly more control over campaign storage pressure than in the past.

The third and final factor is a commitment--in management philosophy backed up with capital dollars--to development of markets. I don't just mean geographical markets, although that is part of the mix, too. I'm talking about producing value-added sugars, packaging them in a variety of formats, and having them available WHEN and WHERE the market wants them. Most

importantly, I'm talking about listening to what the market is asking for and having the flexibility to deliver it.

For many years, beet sugar sales people have been asked to "sell what the company makes". To survive and prosper in the future, they will have to turn that around, so the company "makes what the salesperson can sell". The philosophy of United Sugars is that by supplying products and services the customer wants, we create a "pull" for our sugar, in contrast to "pushing" it into the market with a cheap price. Developing markets--within customer segments, across product lines, in the U.S., Canada or elsewhere--we will be able to sell sugar where the market pays the best premium, not where it can be disposed of in the quickest way.

I must pause for a moment to emphasize another key point. American Crystal and its partners in United Sugars by no means have abandoned cost competitiveness. Whether it's NAFTA or GATT, not having a sugar program or being confronted with Cuban sugar, we are all committed to competing in our markets with refined sugar from any source. Each of United's member co-ops has spent and continues to spend large amounts of capital on processing efficiency. I think the message here is simple--we will continue to exploit our core competency as efficient producers and processors of sugar beets. At the same time, we will develop a flexible, responsive marketing capability to enhance our returns on the selling side. The result will be companies that can compete on a cost basis, but earn premium prices by sensing and fulfilling market demand.

For those of you who arrived on that flight from Mars, the sugar market does NOT operate in a political vacuum. So naturally, if there is something new in the sugar market, there must be policy implications to go along with it. I'll spend just a few moments on what some of those implications might be.

Probably the major problem faced by the beet sugar industry is the uncertainty of yield. One response the industry has used to deal with this uncertainty is to use acreage to compensate for potential yield losses. Of course, recent history illustrates the problems that come with this solution. More acres coupled with good yields means more sugar than the system may be able to cope with in a compressed period of time. The result during the past year was threatened forfeitures and then allotments.

From the perspective of the company that took the largest hit under allotments, American Crystal has a dilemma. Reducing acres might reduce the chances of living through allotments again. But lower acres and bad weather mean walking away from huge chunks of market share. And the only way to regain that

share when production returns to normal is to cut prices--which of course our savvy buyer friends will exploit by pushing their coverage forward again. If this isn't a vicious circle, then I've never seen one.

I think an answer to this dilemma might lie in the policy arena. Domestic producers of beets and cane know that marketing allotments will contain them on the upside, when their crops are especially large. But where do producers turn when their crops go bad? I'm not thinking about a disaster relief program, but about a system where producers and processors can offset abnormally low yields by gaining access to a portion of the tariff rate quota. Just as the minimum quota helps cane refiners and quota countries smooth the effects of a large domestic crop, domestic growers and processors could benefit from a similar type of mechanism. And in a very pragmatic way, the entire market could benefit from this as well. Ironing out massive swings in volume and market share can stabilize prices, and head off some of the cycles of discounting that have plagued the industry in the past. The result would be more certainty about volume for both producers and users, and most likely more stability in pricing as well.

I started out talking to you about Beet Sugar Economics. I'd like to conclude by telling you that from my point of view you can drop the word "Beet". The issues that need to be talked about can be broken down more clearly in terms of "Sugar Economics". In the past beet processors defined their business in terms of yields and extraction. Their interface with the customer too often was reduced to a negotiation over nothing but price. If the trends I have discussed today continue to play out, customers will not know if they are dealing with a beet or a cane company. The processor will structure its operations from the perspective of the customer back to the factory and the field. What we'll see is a re-engineering of the sugar business to fulfill customer needs--not a customer list selected to fill the processor's needs.



ED & F MAN SUGAR LTD

Dynamics of The World Sugar Market

Introduction

Many of the changes in the world sugar market, although arising from the basic characteristics of the commodity itself, are often attributed to government policy changes. This is a testimony to the importance of the protection offered sugar. During the 1980's the assessment of the changes in the world sugar market fell into two relatively distinct schools of thought: the cyclical and the fundamental explanations. Whatever the differences, much of the explanations of price movements and future trends in the market were based on relatively static ideas that examined the reaction of supply and demand sequentially to the changes in the underlying circumstances. In the 1990's, the sugar market has been far more interactive and as a result, it has become almost impossible to assess sensibly the impact of the impending changes. I am glad therefore that, given the title of my talk, I can with some justification attempt to provide a review of some of the salient features of the dynamics of the world market without having to supply a neat answer of the eventual outcome. But first, a few familiar/comfortable themes.

The changes in the world sugar market can be described as reactive and interactive responses.

A- Reactive Responses

Sugar a bulk commodity

1993/94

WORLD SUGAR PRODUCTION & DEMAND

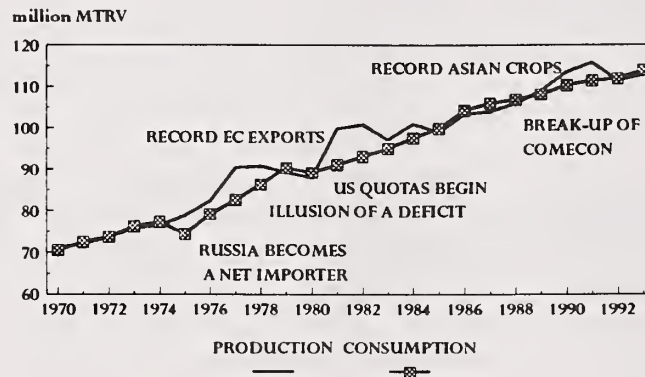
	No of producers	Total Production	No of net importers	Total net imports
Europe	33	31.7	36	9.6
America	31	34.5	17	4.1
Africa	35	7.7	41	3.9
Asia	17	34.2	31	9.5
Oceania	3	4.7	6	0.2
WORLD	119	112.8	131	27.3

Units: million MTRV

Sugar is a highly politicised crop, historically characterised by widespread and active government involvement. Amongst commodities, there are many claims for special treatment, but sugar's claim has more justification than many others perhaps because it is a bulk commodity that transcends both the agricultural and the industrial sectors. The above chart shows some of

the characteristics of the sugar market: a bulk commodity in terms of production and number of producers, a widespread group of importers and, despite heavy domestic interference that reduces the volume of third party trade, still over 27 million tonnes is traded. Given the level of government involvement, it is not surprising that the changing tide of political wind often brings about changes in the structure of the sugar market. The following chart highlights a number of the more significant developments in the world sugar market as a result of policy changes, over the past three decades.

WORLD SUGAR TRENDS



B- Interactive Responses

These we can describe as the dynamics of the sugar market. In order to evaluate these changes I have split them into two categories:

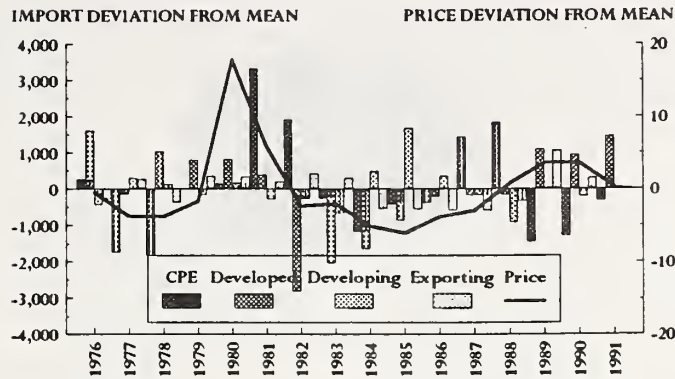
- 1) Evolutionary Changes
- 2) Revolutionary Changes

1) Evolutionary Changes

The gradual change in the fundamental composition of the sugar market such as the rise of developing countries; the diminishing importance of developed countries; and the resulting rise in whites trade can all be described as evolutionary changes. The significance of the LDCs in world trade and in price formation is enhanced because developing countries rely almost exclusively on free market supplies and because they tend to be price sensitive and buy on a hand to mouth basis. Their price sensitivity has tended to put a ceiling on price peaks whilst their hand to mouth purchases has meant that in recent years upward price movements have often lacked momentum. And, devoid of the need for price cover, the possibility of historic price peaks being repeated is reduced. There is a widely held view amongst the trade that the 1980 price peak can almost exclusively be attributed to the zeal of those apparently desperate to secure price cover. Therefore, as the significance of developed countries in world trade has been reduced so has the demand for price cover among importers.

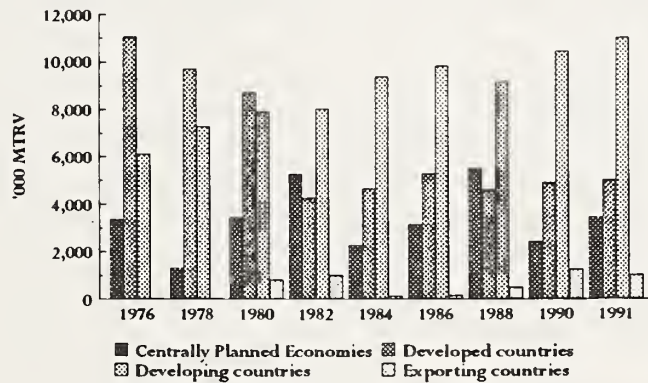
The following chart shows the relative price sensitivity of the developed and developing countries. It highlights the price inelasticity of developed countries' import demand which contrasts with the price sensitive imports of developing countries. The centrally planned economies operated outside the world market price structures until recently.

PRICE SENSITIVITY OF IMPORTERS



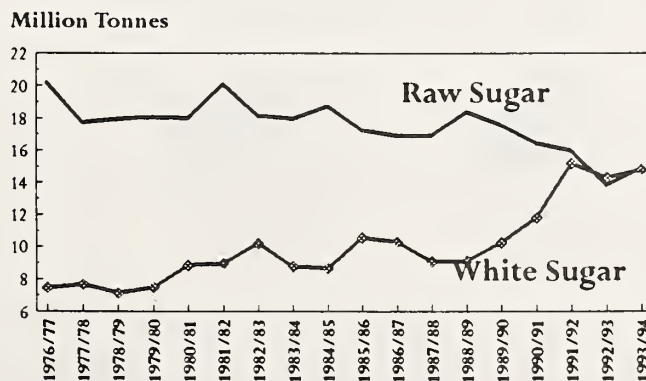
The following chart shows how the import demand of developing countries has increased as that of developed countries has fallen.

SUGAR IMPORT DEPENDENCY

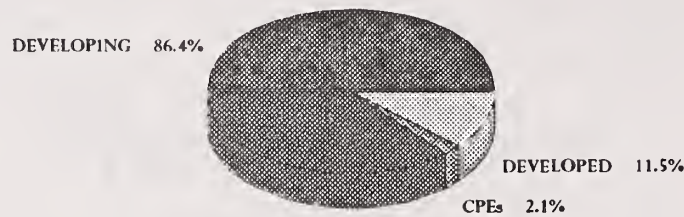


As the share of developing countries' imports has increased so has the trade in white sugar. Today over 86% of the total free market trade in whites goes to developing countries.

WORLD RAW AND WHITE SUGAR TRADE



SHARE OF FREE MARKET WHITE SUGAR IMPORTS IN 1992/93



The developments in industrialised countries have contrasted to those in the LDCs: most notably the growing trend towards domestic self-sufficiency. The rise in EU production, the substitution of sugar by HFCS in the US are familiar themes. Import substitution trade strategies of a number of developing countries have also resulted in support for their domestic sugar industries but, by and large, in developing countries that have historically lacked a background in sugar production, self-sufficiency has proved elusive. This is highlighted by the chart showing the progress of import dependency among developed and developing countries over time.

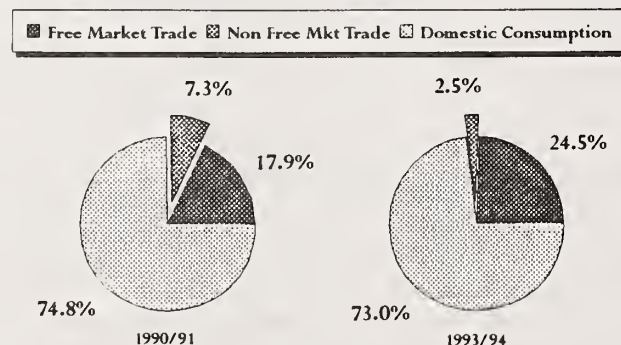
b)Revolutionary Changes

These have been particularly evident recently. The major influences are summarised as follows:

- (i) Rise in free market trade
- (ii) Deregulation of domestic sugar markets
- (iii) Regional customs unions (+GATT !)

(i) The rise in free market trade

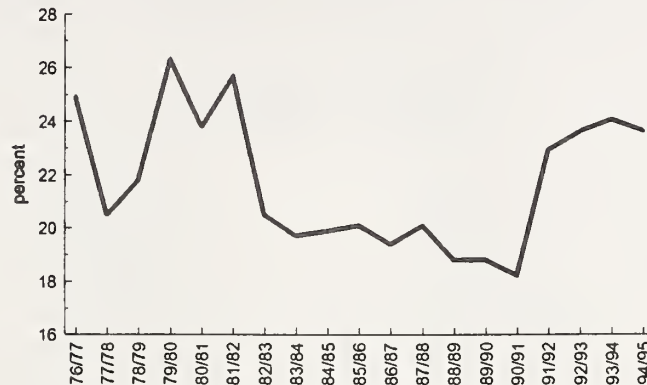
SHARE OF FREE MARKET TRADE IN PRODUCTION



The portion of total world supplies traded on the free market has increased recently. The above pie charts show this change over the past three years whilst the following graph provides a longer perspective. This chart illustrates the ratio of free market trade to production and

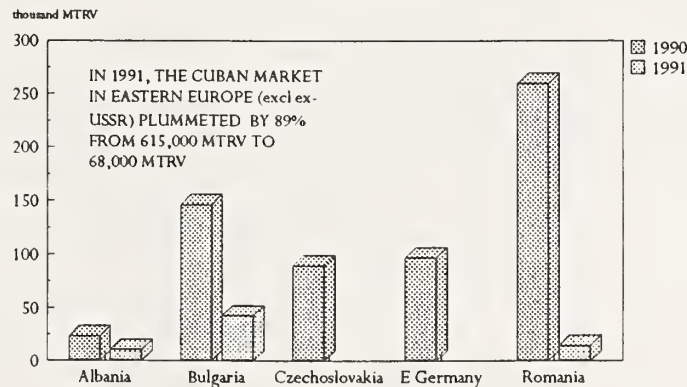
therefore differs somewhat with the one shown earlier by Craig Jenkins showing the total world trade.

WORLD FREE MARKET EXPORTS AS A PERCENTAGE OF PRODUCTION



As the Berlin Wall collapsed, so did central planning in many of the east and central European countries and the Comecon trade pact between Cuba, the former Union and other east and central European countries. Demise of the Comecon trade arrangement has in the first instance increased the volume of free market trade. The chart below shows how quickly the Cuban (centrally engineered) trade to many of the east and central European countries came to a halt. With the changing tariff structures of these countries some Cuban sugar has been imported more recently but this has been through the trade on commercial domestic tolling basis.

CUBAN EXPORTS TO EASTERN EUROPE 1990 vs 1991



Bilateral transactions have all but disappeared. The last remaining protocol tonnages are those with Russia and China. And even with these countries, future arrangements seem very tenuous. Certainly as far as Russia is concerned there have been rumours of moves afoot that would effectively turn the protocol to a supply contract with a number of operators inside Russia.

(ii) Deregulation of the domestic sugar economies.

Apart from the tide of deregulation that has emerged as a result of the changing political structures of the east and central European countries, deregulation and marginalisation of direct government involvements has become popular the world over. As a result, many of the central

marketing bodies have disappeared and both sugar buying and selling has increasingly become conducted in a disparate manner. Over the past five years alone sugar trade whether domestically or internationally has been deregulated in over 20 countries. It is important to point out however, that whereas in many of the east European countries, at least at first, deregulation and trade liberalisation were synonymous, by and large, it is a mistake to assume that deregulation also means trade liberalisation. Deregulation, however, adds to trading opportunity by opening up domestic markets.

DEREGULATED MARKETS

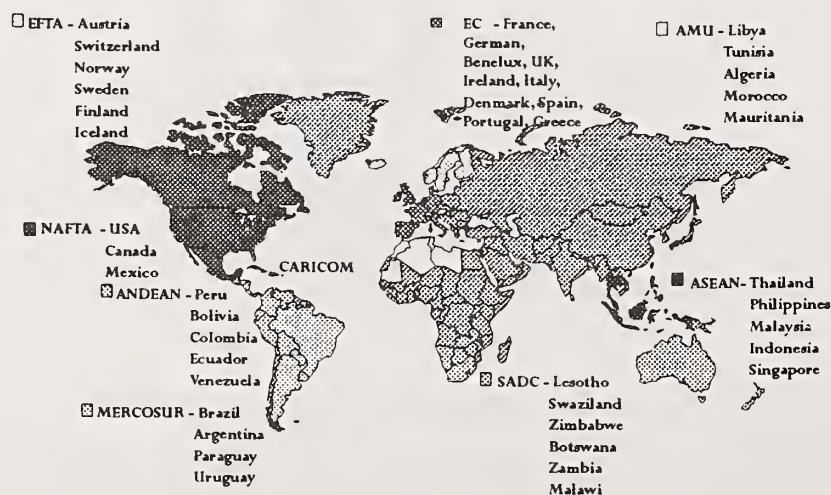
- | | |
|-----------------------|---------------|
| * ROMANIA | * CANADA |
| * BULGARIA | * MEXICO |
| * POLAND | * ARGENTINA |
| * CIS / BALTIC STATES | * BRAZIL |
| * HUNGARY | * CHILE |
| * CZECHOSLOVAKIA | * VENEZUELA |
| * EGYPT | * BANGLADESH |
| * ISRAEL | * SINGAPORE |
| * MOROCCO | * AUSTRALIA |
| | * NEW ZEALAND |

Another noticeable feature of the deregulation and the demise of central buying agencies has been the increasing trend towards substitutability of raws/whites and crystals. The increasing involvement of private trade in a growing number of countries has made imports more price sensitive; at times, sacrificing quality for price.

(iii) Regional Customs Unions

Trade liberalisation has been increasingly restricted to the safety of customs unions. The arguments for economies of scale and free trade have been increasingly embraced within regional boundaries. Although it is arguable to what extent these regional trade pacts allow for freer sugar trade, it is undeniable that their rapid growth will alter traditional trade patterns.

REGIONAL TRADE PACTS



CUSTOMS UNIONS' NET EXTERNAL SUPPLIES*

EC	+4.2m	MERCOSUR	+2.2m
EFTA	- 0.3m	AMU	- 1.8m
CARICOM	—	SACU	+0.5m
NAFTA	-1.2m	SADC	+0.4m
ANDEAN	+0.2m	ASEAN	+2.2m

* supplies are net of fulfilling all fellow members' requirements together with US & ACP Quota obligations

The above have been described as revolutionary changes because they spark a sudden and not a gradual change in the trade patterns. Some of these changes are expected to be reversed with realism but all of them have added to the market's uncertainty and price volatility. You notice that so far I have not mentioned GATT at all. Perhaps this is because it is difficult to associate GATT with the word *dynamic*. In any event given the myriad of escape Clauses, a la safety clause, the position of developing countries, the possibility of diverting the burden of support from the government to the industry and thus averting GATT support limitations, little change is expected in the short to medium term. GATT, however, provides for windows of trading opportunity that may cause a shift in production patterns and put a cap on further growth in protection.

Implication of the Sugar Market Changes

- * Collapse of Comecon & Rise in Free Market Trade
- * Deregulation e.g. Mexico, Brazil, Venezuela, Australia, Singapore, New Zealand
- * Demise of Central Buying Agencies
- * Substitutability between raws, whites and crystals
- * Free Trade Agreements: EEC, EFTA, NAFTA, ASEAN, ANDEAN, SADC
- * **Conclusion : Greater uncertainty in the market**

Farideh Bromfield, November 1993

Disclaimer: The Information in this document has been compiled by E D & F Man Sugar Ltd from various sources and has not been verified independently by E D & F Man Sugar Ltd. No representation or warranty, expressed or implied, is hereby given by E D & F Man Sugar Ltd as to the accuracy or completeness of the information contained herein or supplied herewith. Views expressed do not necessarily constitute those of E D & F Man Sugar Ltd. The contents herein do not constitute any solicitation whatsoever to sell or purchase any securities or commodities. © 1993 E D & F Man Sugar Ltd. All rights reserved. Reproduction in whole or part is prohibited without the prior permission of E D & F Man Sugar Ltd.

AUDIO & VIDEO CASSETTES - ORDER FORM

PROFESSIONALLY
RECORDED & DUPLICATED BY
SATELLITE BROADCASTING
4580E MACK AVENUE
FREDERICK, MARYLAND 21701



70th USDA OUTLOOK CONFERENCE
USDA HEADQUARTERS

Washington, DC

November 30 - December 1, 1993

All presentations are unedited

& verbatim material

on high quality audio tapes.

AT THE CONFERENCE
You may purchase tapes at our
booth in the registration area.

AFTER THE CONFERENCE
Return this convenient mail order
form. Tapes will be sent within
two to three weeks.

COMPLETE AUDIO SET
\$140.00

Qty.	Tape No.	Title	Price	Amount
	HC-01	Secretary's Keynote and 1994 Outlook Issues	\$ 7.00	
	HC-02	Farm and Rural Perspectives on the Outlook	\$ 7.00	
	HC-03	Environmental Issues for 1994 and Beyond	\$ 7.00	
	HC-04A/04B	Food Safety and Nutrition Issues for 1994 and Beyond [2 Tapes]	\$ 14.00	
	HC-05	U.S. and World Agricultural Outlook for 1994	\$ 7.00	
	HC-06	U.S. and World Food Grains Prospects	\$ 7.00	
	HC-07	Dairy Prospects and Future Demand	\$ 7.00	
	HC-08	Forest Products Outlook, 1994 and Beyond	\$ 7.00	
	HC-09	Food Prices and Retail Demand Prospects	\$ 7.00	
	HC-10	U.S. and World Feed Grains Prospects	\$ 7.00	
	HC-11	Greenhouse, Turfgrass and Nursery Outlook	\$ 7.00	
	HC-12	Farm Business and Household Finance: Issues and Outlook	\$ 7.00	
	HC-13	1994 Cotton Prospects	\$ 7.00	
	HC-14	Cotton Luncheon Speech: Hill Views	\$ 7.00	
	HC-15	Analysts Size Up the Oilseeds Complex	\$ 7.00	
	HC-16	Fruit & Vegetable Outlook, Minor Use Chemicals	\$ 7.00	
	HC-17	What's in Store for Tobacco?	\$ 7.00	
	HC-18	Livestock & Poultry: '94 Outlook and Industry Trends	\$ 7.00	
	HC-19	Developing Export Markets for Aquaculture	\$ 7.00	
	HC-20A/20B	U.S. and World Sweeteners Outlook in a Dynamic Marketplace [2 Tapes]	\$ 14.00	
	HC-21	Sweeteners Dinner Speaker	\$ 7.00	
	HC-100	COMPLETE SET AUDIO TAPES (Cassettes in Storage Albums)	\$140.00	

COMPLETE SET VIDEO TAPES
\$ 135.00

SUBTOTAL	
Maryland Residents Add 5% Sales TAX	
SHIPPING & HANDLING (Audio tapes only) U.S. & Canada	\$ 4.00
FOREIGN SHIPPING \$4.00 per tape — Maximum \$40.00	
TOTAL AMOUNT DUE	

	HCV-01	Secretary's Keynote and 1994 Outlook Issues	\$ 15.00	
	HCV-02	Farm and Rural Perspectives on the Outlook	\$ 15.00	
	HCV-03	Environmental Issues for 1994 and Beyond	\$ 15.00	
	HCV-04	Food Safety and Nutrition Issues for 1994 and Beyond	\$ 15.00	
	HCV-05	U.S. and World Agricultural Outlook for 1994	\$ 15.00	
	HCV-06	U.S. and World Food Grains Prospects	\$ 15.00	
	HCV-10	U.S. and World Feed Grains Prospects	\$ 15.00	
	HCV-15	Analysts Size Up the Oilseeds Complex	\$ 15.00	
	HCV-18	Livestock & Poultry: '94 Outlook and Industry Trends	\$ 15.00	
	HCV-100	COMPLETE SET VIDEO TAPES	\$135.00	

- FOREIGN COUNTRY VERSIONS @ \$5.00 EXTRA/ TAPE
- I Need My Tape in _____ PAL/ _____ SECAM FORMAT

METHOD OF PAYMENT: DATE

____ Enclosed is my CHECK (Drawn on US Bank in US Funds)

____ VISA ____ MASTERCARD ____ AMEX

All sales final. Please include payment with your order.

PLEASE PRINT

Name _____

Company _____

Address _____

City _____ State _____ Zip _____

Phone No. () _____

SUBTOTAL	
FOREIGN COUNTRY VERSIONS @ \$5.00 EXTRA/ TAPE	
Maryland Residents Add 5% Sales TAX	
SHIPPING & HANDLING (Video tapes only) U.S. & Canada	\$ 5.00
FOREIGN SHIPPING \$5.00 per tape	
TOTAL AMOUNT DUE	

Acct. No. _____

Exp. Date _____

Signature _____

MAIL TO:

SATELLITE BROADCASTING, INC.
4580E Mack Avenue
Frederick, Maryland 21701
(301) 662-0371 (800) 747-0856

Fax (301) 662-4014



charter member, INTERNATIONAL SOCIETY OF COMMUNICATIONS SPECIALISTS

